

Final Report

CITY OF JACKSON CIRCULATION ELEMENT

Prepared for:
City of Jackson
Amador County Transportation Commission

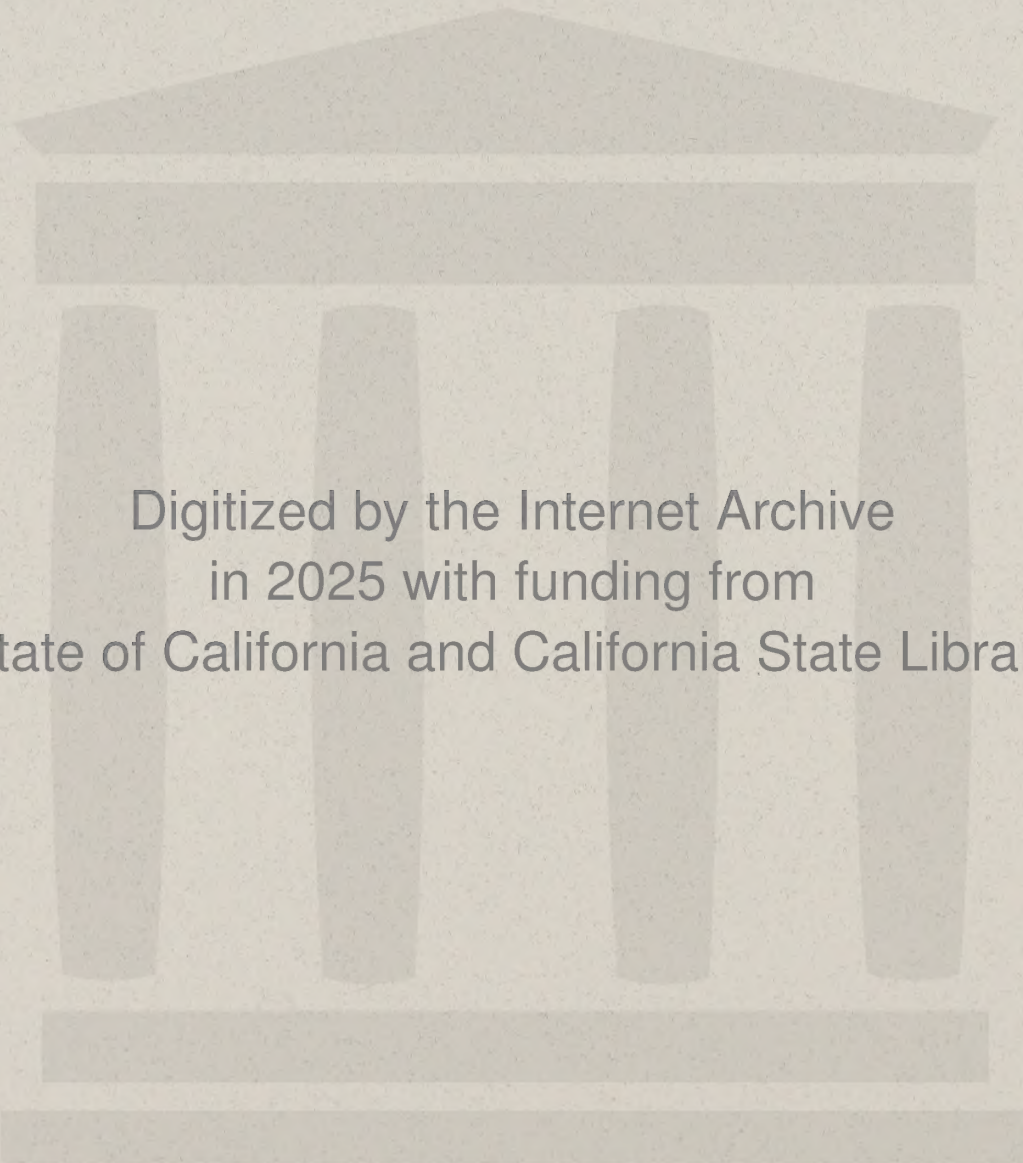
August, 1999

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TABLE OF CONTENTS

| | | |
|------|--|----|
| I. | INTRODUCTION..... | 1 |
| II. | GOALS, POLICY, AND VISION..... | 2 |
| III. | EXISTING CIRCULATION SYSTEM..... | 21 |
| IV. | FUTURE NEEDS ASSESSMENT..... | 32 |
| V. | EVALUATION OF IMPROVEMENT OPTIONS..... | 38 |
| VI. | PREFERRED CIRCULATION PLAN..... | 48 |

**CITY OF JACKSON
CIRCULATION ELEMENT**

FINAL REPORT

Prepared By:

Fehr & Peers Associates, Inc.

in association with

CSW Planning Associates

Prepared for:

**CITY OF JACKSON
AMADOR COUNTY TRANSPORTATION COMMISSION**

AUGUST, 1999

TABLE OF CONTENTS

| | <u>Page</u> |
|---|-------------|
| I. INTRODUCTION..... | 1 |
| II. GOALS, POLICIES AND IMPLEMENTATION MEASURES | 5 |
| III. EXISTING CIRCULATION SYSTEM..... | 21 |
| IV. FUTURE NEEDS ASSESSMENT | 32 |
| V. EVALUATION OF IMPROVEMENT OPTIONS..... | 39 |
| VI. PREFERRED CIRCULATION PLAN | 44 |
| 7. Year 2018 – Daily Level of Service..... | 57 |
| 8. Improvement Options | 60 |
| 10. Recommended 2018 Roadway System..... | 65 |
| 11. Proposed Functional Classification System..... | 66 |
| 12. RR Alignment and Lane Recommendations | 68 |
| 13. Land Use Planning Options..... | 70 |
| 14. Proposed Truck Routes | 73 |

LIST OF FIGURES

| | | |
|----|---|----|
| 1 | Jackson Study Area..... | 2 |
| 2 | Existing Functional Classification System | 22 |
| 3 | Existing Traffic Volumes..... | 26 |
| 4 | Existing Daily Levels of Service | 28 |
| 5 | Year 2006 – Daily Traffic Volumes | 33 |
| 6 | Year 2016 – Daily Traffic Volumes | 34 |
| 7 | Year 2006 – Daily Levels of Service | 36 |
| 8 | Year 2016 – Daily Levels of Service | 37 |
| 9 | Improvement Options | 40 |
| 10 | Recommended 2016 Roadway System..... | 45 |
| 11 | Proposed Functional Classification System..... | 46 |
| 12 | SR 49/Argonaut Lane Realignment | 48 |
| 13 | Long Range Planning Options | 50 |
| 14 | Proposed Truck Routes | 53 |

LIST OF TABLES

| | | |
|---|--|----|
| 1 | Level of Service Description..... | 24 |
| 2 | Level of Service Criteria..... | 25 |
| 3 | Summary of Roadway Deficiencies..... | 35 |
| 4 | Status of Improvement Options Following Traffic Evaluation | 41 |
| 5 | Order-of-Magnitude Cost Estimates (1999 dollars)..... | 43 |

PURPOSE

The purpose of the City of Jackson Circulation Element is to develop a comprehensive circulation plan for all travel modes within the Jackson area and to provide a strategy for financing projected transportation improvements. The element is designed to address all requirements of the General Plan Guidelines, except the circulation of energy, water, sewage, storm drainage and communication.

STUDY AREA

The City of Jackson is the County seat for Alameda County and has a current (2000) population of 3,281, which has remained constant since 1996. Jackson is located in the southwestern portion of Alameda County at the crossroads of State Routes 49 and 89. Figure 1 displays the Jackson study area. It encompasses the Jackson City limits and adjoining areas that the City identified as its planning area for this study.

STUDY PROCESS

The study was directed by representatives from the City of Jackson and the Alameda County Transportation Commission (ACTC). Additional input from California Department of Transportation (Caltrans) representatives was provided as needed.

The study was conducted in three major steps. Each step was documented with a detailed memorandum that was presented to the City for review and approval. The following summarizes the content of each document.

I. INTRODUCTION

BACKGROUND

The 1999 City of Jackson Circulation Element was prepared as part of the update to the long-range transportation planning documents for each jurisdiction within Amador County. The City has amended its land use projections and updated them to 2016 conditions (i.e. the 20-year planning horizon) consistent with the 1996/97 Amador County Regional Transportation Plan. The Amador County traffic model has been utilized to include these land use growth projections as well as updated land use projections for the remainder of Amador County.

PURPOSE

The purpose of the City of Jackson Circulation Element is to develop a comprehensive circulation plan for all travel modes within the Jackson area and to provide a strategy for financing preferred transportation improvements. The element is designed to address all requirements of the General Plan Guidelines, except the circulation of energy, water, sewage, storm drainage and communications.

STUDY AREA

The City of Jackson is the County seat for Amador County and has a current (1999) population of 3,880, which has remained constant since 1996. Jackson is located in the southwestern portion of Amador County at the crossroads of State Routes 49 and 88. Figure 1 displays the Jackson study area. It encompasses the Jackson City limits and outlying areas that the City identified as its planning area for this study.

STUDY PROCESS

The study was directed by representatives from the City of Jackson and the Amador County Transportation Commission (ACTC). Additional input from California Department of Transportation (Caltrans) representatives was provided as needed.

The study was conducted in three major steps. Each step was documented with a technical memorandum that was presented to the City for review and approval. The following summarizes the content of each document.

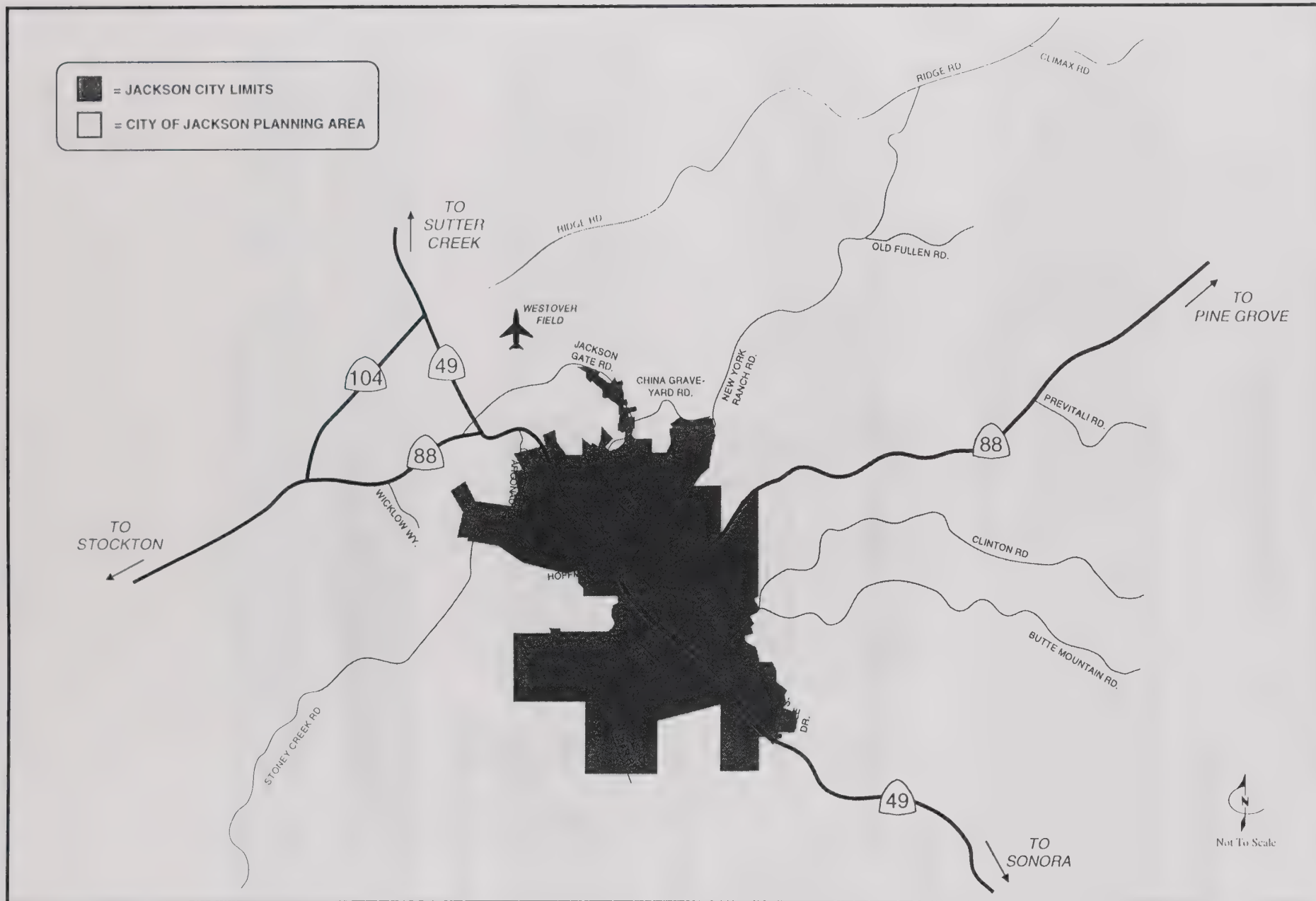


FIGURE 1

JACKSON STUDY AREA

fp Fehr & Peers Associates, Inc.
Transportation Consultants

- *Growth Projections* were summarized in an August 5, 1996 technical memorandum to the City. This memorandum documented the land use growth projections for the study area that were used to forecast travel growth.
- *Deficiencies and Improvement Options* were identified in an October 16, 1996 technical memorandum to the City. Future year traffic forecasts, deficiencies in the transportation system and potential improvement options were presented in this document. A public meeting was held at the City Council on November 18, 1996 to discuss the options.
- *Analysis of Improvement Options* was presented in a February 12, 1997 report that provided an assessment of improvement options and recommendations for a preferred plan. Factors considered in this analysis included cost, benefit to traffic operations, and financial and environmental constraints.

The results of these technical reports and subsequent comments received from the City were used as the basis for the City of Jackson Circulation Element.

LEGAL REQUIREMENTS

Government Code Section 65302(b) requires that the general plan (for a city or county) shall include a circulation element consisting of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other local public utilities and facilities, all correlated with the land use element of the plan. The circulation element has been a requirement of state planning law since 1955 and it typically serves as an infrastructure plan for existing and proposed facilities needed to support the safe and effective circulation of people, goods, energy, water, sewage, storm drainage, and communications.

The State of California *General Plan Guidelines* dated 1990, identify four mandatory issues that must be included in a circulation element, which include major thoroughfares, transportation routes, terminals, and other local public utilities and facilities.

Major thoroughfares and transportation routes are similar in that they both include roadways of local, regional, state and national significance. Transportation routes also include the routes associated with all forms of travel such as transit service, bikeways, and goods movement. Loading or unloading points on these routes are typically considered terminals because they identify where a route begins, ends or allows transfers between travel modes.

The issue of other local public utilities and facilities relates to the transport and circulation of energy, water, sewage, storm drainage and communications. This update of the City of Jackson Circulation Element focuses on the movement of people and goods and does not include public utility information.

LAND USE CONSISTENCY

Circulation elements must be consistent and correlated with the land use element of the general plan (Government Code Sections 65300.5 and 65302 (b)). In fact, the amount, type and location of land uses proposed in the land use plan drives the need for improvements to the circulation system. Therefore, not only should the two elements be consistent and correlated, the land use plan should serve as an input to the circulation element as the principal means by which estimates of locally generated travel demand are made.

For the purposes of this update, the City of Jackson undertook an extensive process for estimating and allocating future growth. The process involved the development of growth assumptions generally consistent with the California Department of Finance and Employment Development Department growth rates for population and employment. It also included the specific allocation of future land uses to areas of the City based on the Draft Land Use Element currently being prepared by the City. The allocated land use was input into the traffic model, which was also developed as part of the regional planning effort, to generate estimates of travel demand that could be analyzed to identify deficiencies for improvement.

ORGANIZATION OF THE REPORT

This report contains the updated City of Jackson Circulation Element including a summary of the background technical analysis for the development of the preferred circulation plan. This report is organized into the following chapters:

- Chapter II - Goals, Policies, and Implementation Measures;
- Chapter III - Existing Circulation System;
- Chapter IV - Future Needs Assessment;
- Chapter V - Evaluation of Improvement Options; and
- Chapter VI - Preferred Circulation Plan.

II. GOALS, POLICIES, AND IMPLEMENTATION MEASURES

This chapter provides the City of Jackson with specific policy direction toward achieving an effective circulation system. The aim of the Element’s goals, objectives, policies and implementation measures is to improve the efficiency of the City’s transportation and circulation network and provide for the movement of people, goods, and energy with a minimum of negative external effects. These negative effects could include safety hazards, congestion, and noise.

The Circulation Element’s provisions are mandated by State law to be correlated with, and support, the goals and policies of the Land Use Element. Toward this end, the following goals, objectives and policies are consistent with the State requirements which are detailed in Government Code Section 65302(b).

Note: Each policy stated below is to be implemented through specific measures—policies are listed in the left-hand column with corresponding implementation measures in the right-hand column. A detailed explanation of each numbered implementation measure is included at the end of this chapter.

CENTRAL BUSINESS DISTRICT CIRCULATION

| | |
|---------------|---|
| Goal 1 | To enhance accessibility and mobility within the Central Business District (CBD) in order to promote its economic vitality and historic value. |
|---------------|---|

| | |
|----------------------|---|
| OBJECTIVE 1.A | <i>To assist business owners and merchants in developing solutions to circulation, access and parking deficiencies and creating the best possible circulation, access and parking configurations in the CBD, including the most feasible financing mechanisms for each component.</i> |
|----------------------|---|

| POLICIES | IMPLEMENTATION MEASURES |
|---|--|
| Policy 1.A.1 The City shall alleviate parking and congestion problems in the CBD. | 1. <i>Downtown Parking Plan</i> 2. <i>Jackson City Code</i> 3. <i>ARTS Public Transit Service</i> |
| Policy 1.A.2 The City shall facilitate visitor access to the CBD. | 1. <i>Downtown Parking Plan</i> 2. <i>Jackson City Code</i> 17. <i>Countywide Bicycle and Pedestrian Master Plan</i> |
| Policy 1.A.3 The City shall work with business owners and merchants to provide improvements to parking and circulation within the CBD. | 1. <i>Downtown Parking Plan</i> 5. <i>Land Use Element</i> |

TRANSPORTATION AND CIRCULATION

| | |
|---------------|--|
| Goal 2 | To promote effective transport of goods, and safe and efficient movement of all segments of the population. |
|---------------|--|

OBJECTIVE 2.A *To minimize traffic and congestion in the City of Jackson.*

POLICIES

Policy 2.A.1 The City shall develop and manage its trafficways to facilitate uncongested and safe flow of traffic, and maintain an average daily LOS "C", with an upper threshold of LOS "D" to be permitted along State Route 88 east of State Route 49.

Policy 2.A.2 The City shall require that new development's internal circulation plans include provisions for pedestrians, bicycles, automobiles, parking and bus shelters for public transportation.

Policy 2.A.3 The City shall require that rights-of-way be sufficient to ensure adequate area for future expansion to accommodate long-range planning options shown in Figure 13.

Policy 2.A.4 All road facilities shall be constructed or upgraded to acceptable safety standards where practical and economically feasible.

Policy 2.A.5 Shuttle service shall be utilized wherever feasible during special events/activities to effectively minimize circulation conflicts.

Policy 2.A.6 New development plans which generate a direct need for new off-site roadways, road widening or upgrade intersection improvements, traffic controls or other similar improvements shall be required to construct the needed improvements to City standards as part of project approval.

IMPLEMENTATION MEASURES

- 6. *Interagency Coordination*
- 9. *Circulation Element Update*
- 10. *Capital Improvement Program (CIP)*
- 7. *Road Design Standards*
- 8. *Development Review*
- 17. *Countywide Bicycle and Pedestrian Master Plan*
- 7. *Road Design Standards*
- 8. *Development Review*
- 8. *Development Review*
- 10. *Capital Improvement Program (CIP)*
- 11. *Caltrans Signal Warrant Studies*
- 3. *ARTS Public Transit Service*
- 7. *Road Design Standards*
- 8. *Development Review*
- 13. *Local Traffic Mitigation Fee Program.*

Policy 2.A.7 New developments shall be required to mitigate costs for the off-site indirect impacts or cumulative impacts generated by the new traffic they add to the existing circulation system.

- 12. *Regional Traffic Mitigation Fee Program*
- 13. *Local Traffic Mitigation Fee Program*

Policy 2.A.8 New development circulation plans shall be in conformance with General Plan's goals and policies, the Circulation Element map, City codes and adopted standards.

- 8. *Development Review*

OBJECTIVE 2.B *Maintain adequate parking in the City of Jackson.*

POLICIES

Policy 2.B.1 Adequate off-street parking facilities or other suitable provisions shall be provided for each building and land use in the City.

IMPLEMENTATION MEASURES

- 1. *Downtown Parking Plan*
- 2. *Jackson City Code*
- 7. *Road Design Standards*

OBJECTIVE 2.C *To ensure that the costs of upgrading the circulation system in response to growth in the City and surrounding area do not become a financial burden to existing residents and service providers.*

POLICIES

Policy 2.C.1 The City shall require that new developments design, construct, dedicate, and/or finance their fair share of off-site transportation improvements and facilities needed to manage additional traffic generated by the development.

IMPLEMENTATION MEASURES

- 7. *Road Design Standards*
- 8. *Development Review*
- 12. *Regional Traffic Mitigation Fee Program*
- 13. *Local Traffic Mitigation Fee Program*

Policy 2.C.2 The City shall continue to notify ARTS and Amador County School District for their comments on any development projects which may have an impact on the service area and ridership.

- 20. *Environmental Review*

Policy 2.C.3 Developers adjacent to the highways shall be required to provide dedications of right-of-way needed for future widening and to pay a their fair share portion of the cost of widening.

- 12. *Regional Traffic Mitigation Fee Program*
- 13. *Local Traffic Mitigation Fee Program*

Policy 2.C.4 Developers shall be encouraged to preserve right-of-way to accommodate the long-range planning options shown on Figure 13.

- 7. *Road Design Standards*
- 8. *Development Review*

Policy 2.C.5 The City shall pursue additional funding when existing revenues are not adequate to provide necessary transportation improvements.

- 14. *State and Federal Legislation*
- 15. *Transportation Funding*

Policy 2.C.6 New development shall provide for long-term maintenance of their internal circulation facilities.

- 16. *Assessment Districts*

GOODS MOVEMENT

Goal 3 To maintain a balanced freight transportation system to provide for the safe and efficient movement of goods.

OBJECTIVE 3.A *To continue efforts in the expansion and use of rail and truck delivery services without creating circulation problems.*

POLICIES

Policy 3.A.1 The City shall restrict truck delivery activities from taking place during peak hours by encouraging businesses to do the majority of their shipping and receiving before or after normal business hours.

IMPLEMENTATION MEASURES

- 2. *Jackson City Code*

Policy 3.A.2 The City shall direct through-truck traffic to specific major roads in order to maintain public safety and local quality of life.

- 2. *Jackson City Code*

Policy 3.A.3 The City shall direct local truck traffic to specific roads in order to maintain public safety and local quality of life.

- 2. *Jackson City Code*

SCENIC CORRIDORS

Goal 4 To preserve and enhance the character of scenic and historic routes through the community.

OBJECTIVE 4.A *To preserve and enhance scenic and historic views from obstruction by new development.*

POLICIES

Policy 4.A.1 Views along designated scenic routes shall not be degraded.

Policy 4.A.2 New development along scenic or historic routes shall be required to incorporate visual aesthetics into the design of transportation facilities.

Policy 4.A.3 The City shall establish a continuous hike-and-bike system linking scenic/historic areas of Jackson.

IMPLEMENTATION MEASURES

5. *Land Use Element*

5. *Land Use Element*

20. *Countywide Bicycle and Pedestrian Master Plan*

TRANSIT

| | |
|---------------|--|
| Goal 5 | Provide effective and efficient public transportation and reduce automobile dependency. |
|---------------|--|

OBJECTIVE 5.A *To participate in the planning and implementation of transit services that are timely, cost-effective and responsive to the area's growth patterns and existing and future transit demand.*

POLICIES

Policy 5.A.1 The City shall encourage alternatives to single-occupant vehicle trips and make alternatives available to the extent deemed practical and economical.

Policy 5.A.2 The City shall require new development to construct or contribute financially for transit facilities, as deemed necessary, for purposes of public convenience and fuel conservation, and to ensure transportation for the elderly and disabled.

Policy 5.A.3 The City shall promote ridesharing and the use of park-and-ride facilities.

Policy 5.A.4 The City shall actively promote the use of transit during special community events.

IMPLEMENTATION MEASURES

4. *Demonstration Project*

8. *Development Review*

10. *Capital Improvement Program*

8. *Development Review*

6. *Interagency Coordination*

18. *Rideshare Information*

3. *ARTS Public Transit Service*

Policy 5.A.5 The City shall encourage the design of public and private outdoor seating to double for bus stop seating, where appropriate.

8. *Development Review*

NON-MOTORIZED TRANSPORTATION

Goal 6 To provide a safe, comprehensive and integrated circulation system for non-motorized transportation.

OBJECTIVE 6.A *To make bicycle and pedestrian travel an integral part of the City's circulation system.*

POLICIES

Policy 6.A.1 The City shall construct sidewalks or pedestrian walkways along Highways 49 and 88.

Policy 6.A.2 The City shall continue to require new development to construct sidewalks or meandering walkways along all street perimeters.

Policy 6.A.3 The City shall promote use of walking routes, walkways and hiking trails.

Policy 6.A.4 The City shall encourage businesses to shelter sidewalks through the use of awnings and increased outdoor seating.

Policy 6.A.5 The City shall encourage walking tours throughout the City through the use of brochures designating points of interest.

IMPLEMENTATION MEASURES

6. *Interagency Coordination*
10. *Capital Improvement Program*
14. *State and Federal Legislation*
17. *Countywide Bicycle and Pedestrian Master Plan*

8. *Development Review*

5. *Land Use Element*
17. *Countywide Bicycle and Pedestrian Master Plan*

5. *Land Use Element*
8. *Development Review*

6. *Interagency Coordination*
17. *Countywide Bicycle and Pedestrian Master Plan*

OBJECTIVE 6.B *To encourage bicycle usage as an energy-efficient, recreational mode of transportation.*

POLICIES

Policy 6.B.1 The City shall eliminate barriers to bicycle traffic within selected areas.

IMPLEMENTATION MEASURES

17. *Countywide Bicycle and Pedestrian Master Plan*

Policy 6.B.2 Bicycle lanes shall be constructed along new or reconstructed arterial and collector routes in, or adjacent to, the City wherever possible.

Policy 6.B.3 The City shall require new development to construct bicycle routes and/or provide secure facilities (i.e. bike racks), where feasible.

Policy 6.B.4 The City shall encourage existing businesses and employers to provide bicycle storage and lockers in order to promote bicycle commuter travel.

Policy 6.B.5 The City shall promote bicycle safety awareness and the responsibilities of cyclists.

Policy 6.B.6 The City shall continue to encourage the coordination of bicycle use with mass transit by equipping all buses with bicycle racks.

- 7. *Road Design Standards*
- 10. *Capital Improvement Program*
- 17. *Countywide Bicycle and Pedestrian Master Plan*

- 7. *Road Design Standards*
- 8. *Development Review*

- 8. *Design Review*
- 17. *Countywide Bicycle and Pedestrian Master Plan*

- 21. *Bicycle Safety Awareness Program*

- 3. *ARTS Public Transit Service*

AIR TRANSPORTATION

| | |
|---------------|---|
| Goal 7 | To protect Westover Field as a valuable asset to the region. |
|---------------|---|

OBJECTIVE 7.A *To eliminate land use conflicts that threaten Westover Field through relocation or protection from encroachment by non-compatible development.*

POLICIES

Policy 7.A.1 All development projects proposed within the Westover Field airport overflight zone or specific safety zones shall be in compliance with the Airport Land Use Plan.

IMPLEMENTATION MEASURES

- 8. *Development Review*
- 19. *Airport Land Use Plan*
- 20. *Environmental Review*

IMPLEMENTATION MEASURES

IMPLEMENTATION

MEASURE 1

DOWNTOWN PARKING PLAN. Proceed with a detailed study of downtown parking availability and parking needs, both current and projected. Based on the findings, develop and implement a Downtown Parking Plan. The Plan should identify future parking and circulation improvements, including parking areas for CBD workers so as not to impede shopper and visitor parking.

| | |
|-----------------|----------------------|
| Responsibility: | Planning Department |
| Time frame: | FY 99-00 |
| Funding: | General Fund, Grants |

IMPLEMENTATION

MEASURE 2

JACKSON CITY CODE. Strictly enforce all applicable ordinances contained in the City Code which will assist in implementing the Circulation Element. Review and revise ordinances where needed to facilitate implementation. The Parking Ordinance would implement the Element by facilitating visitor parking and by directing CBD workers to refrain from parking in vital Main Street parking spaces. By specifying restrictions regarding the delivery hours of trucks, etc. it would further improve circulation. Truck routing would be aided through Chapter 10.20 of the City Code, which includes statutory provisions regarding the authority of the City to prohibit the use of certain streets and bridges by any commercial vehicle or by any vehicle exceeding a maximum specific weight in accordance with California Vehicle Code (CVC) Section 35701 (Note: Section 10.20.010 of this chapter designates a truck route for weight-restricted vehicles).

| | |
|-----------------|--------------------------|
| Responsibility: | City staff, City Council |
| Time frame: | Ongoing |
| Funding: | General Fund |

IMPLEMENTATION

MEASURE 3

AMADOR RAPID TRANSIT SYSTEM (ARTS) PUBLIC TRANSIT SERVICE. Continue to expand the use of Amador

Rapid Transit System's (ARTS) public transit service to the Central Business District, including ARTS special events shuttle service during significant Main Street activities.

| | |
|-----------------|---|
| Responsibility: | City staff, ARTS |
| Time frame: | Ongoing |
| Funding: | Local Transportation Funds; Federal Transit Administration grant funds, farebox, and local service clubs/donations (special events) |

IMPLEMENTATION **MEASURE 4**

DEMONSTRATION PROJECT. Support implementation of a demonstration project that would provide fixed-route bus service from Jackson through Ione to Rancho Murieta and connect to Sacramento Regional Transit's (RT) service to the CSUS light rail station and downtown Sacramento.

| | |
|-----------------|--|
| Responsibility: | City Council, ARTS |
| Time frame: | Scheduled to begin FY 99 |
| Funding: | Federal Transit Administration funds, Local Transportation Funds |

IMPLEMENTATION **MEASURE 5**

LAND USE ELEMENT. Evaluate all development proposals in accordance with the designated land uses and Design Standards specified in the City's Land Use Element of the General Plan.

| | |
|-----------------|---|
| Responsibility: | City staff, Planning Commission, City Council |
| Time frame: | Ongoing |
| Funding: | General Fund |

IMPLEMENTATION **MEASURE 6**

INTERAGENCY COORDINATION.

- Work with Amador County Transportation Commission (ACTC), Caltrans and other jurisdictions to review and monitor LOS standards and update those standards as appropriate.

- Enter into a cooperative agreement with Caltrans, in accordance with the *Countywide Bicycle and Pedestrian Master Plan*, to further evaluate the need for sidewalks along State Highways 49 and 88 and to construct walkways along these highways to improve pedestrian safety and access.
- Coordinate with ACTC to implement measures included in the *Countywide Bicycle and Pedestrian Master Plan*, once adopted, which will facilitate bicycle and pedestrian traffic through the City of Jackson .
- Contact Caltrans to obtain informational brochures for public distribution on walking tours through the City of Jackson.
- Contact the San Joaquin Council of Governments to obtain informational materials on carpooling and vanpooling for public distribution at various locations throughout the City.

Responsibility: City staff
 Time frame: Ongoing
 Funding: General Fund

IMPLEMENTATION

MEASURE 7

ROAD DESIGN STANDARDS. Continue to refine and improve the design standards for the City's roadway system. Standards shall serve as evaluation criteria to determine whether development impacts on streets constrained by width, historic value, steepness or other factors exceed acceptable limits. The design standards shall reflect functional classifications and include the following elements:

- *Right-of-way requirements which meet State and federal standards;*
- *Roadway cross-sections including landscaping and bikeways;*
- *Signalization and access control;*
- *Land use compatibility, building orientation; street/driveway access; and*
- *Vehicle and pedestrian safety.*

Responsibility: Public Works Department
 Time frame: FY 1999-00
 Funding: General Fund

IMPLEMENTATION
MEASURE 8

DEVELOPMENT REVIEW. Refer all development proposals to City staff to identify needed improvements by each project. Standards included in, but not limited to, the Land Use Element, Zoning Ordinance, Subdivision Ordinance and Road Design Standards will be used as evaluation criteria.

| | |
|-----------------|--|
| Responsibility: | City staff, Planning Commission, City Council |
| Time frame: | Ongoing |
| Funding: | Application fees |

IMPLEMENTATION
MEASURE 9

CIRCULATION ELEMENT UPDATE. Update the Circulation Element every five (5) years in conjunction with the update of the City's Capital Improvement Program (CIP).

| | |
|-----------------|---------------------------------------|
| Responsibility: | Planning Department, City Council |
| Time frame: | FY 99-00, every five years thereafter |
| Funding: | General Fund |

IMPLEMENTATION
MEASURE 10

CAPITAL IMPROVEMENT PROGRAM. Develop and implement a local Capital Improvement Program (CIP), outlining project priorities, timing, costs and methods of financing, for the development and construction of local and regional streets. Update the CIP every (5) five years or concurrently with the approval of any significant modification of the City's land use allocation. Include in the CIP the street and intersection improvements within designated time frames in accordance with the Circulation Element's Figure 10 (for the 20-year plan) and Figure 13 (for long-range planning options).

| | |
|-----------------|---------------------------------------|
| Responsibility: | City staff, City Council |
| Time frame: | FY 99-00, every five years thereafter |
| Funding: | General Fund |

IMPLEMENTATION
MEASURE 11

CALTRANS SIGNAL WARRANT STUDIES. Request Caltrans to complete preparation of signal warrant studies for the eventual widening of Highways 49 and 88 through the City and the installation of a traffic signal at the Highway 49 intersection with Clinton Road.

| | |
|-----------------|---|
| Responsibility: | City staff, Caltrans |
| Time frame: | FY 2004 |
| Funding: | STIP funds, Local Transportation Funds, and Mitigation Fees |

IMPLEMENTATION
MEASURE 12

REGIONAL TRAFFIC MITIGATION FEE PROGRAM. Continue to work with Amador County Transportation Commission (ACTC) to adopt and implement the Regional Traffic Mitigation Fee program that requires new development to pay the fees for its fair share of improvements to the regional transportation system.

| | |
|-----------------|--------------------------------|
| Responsibility: | City staff, City Council, ACTC |
| Time frame: | FY 99-00, ongoing thereafter |
| Funding: | Developer Fees |

IMPLEMENTATION
MEASURE 13

LOCAL TRAFFIC MITIGATION FEE PROGRAM. Revise the City's Streets and Bridges Mitigation Fee Program and implement it as the Local Traffic Mitigation Fee Program which will require new development to pay its fair share of fees for improvements to the City's local transportation system.

| | |
|-----------------|---------------------------|
| Responsibility: | City staff, City Council |
| Time frame: | FY 99, ongoing thereafter |
| Funding: | Developer Fees |

IMPLEMENTATION
MEASURE 14

STATE AND FEDERAL LEGISLATION. Continue to work with ACTC to pursue changes in State and federal laws, regulations, and guidelines to eliminate the restriction on the

use of funds, as additional flexibility is necessary to determine expenditure priorities according to local needs.

| | |
|-----------------|--------------------------|
| Responsibility: | City staff, City Council |
| Time frame: | Ongoing |
| Funding: | General Fund |

IMPLEMENTATION

MEASURE 15

TRANSPORTATION FUNDING. Work with Amador County Transportation Commission (ACTC) to explore funding opportunities, including grants or cost-sharing programs, for all components of the City's transportation system that are required to meet the goals and objectives of the General Plan.

| | |
|-----------------|--------------------------|
| Responsibility: | City staff, City Council |
| Time frame: | Ongoing |
| Funding: | General Fund |

IMPLEMENTATION

MEASURE 16

ASSESSMENT DISTRICTS. New developments will be required to establish assessment districts, where appropriate, to fund long-term maintenance of internal roadways.

| | |
|-----------------|--------------------------------|
| Responsibility: | City staff, Project Developers |
| Time frame: | Ongoing |
| Funding: | Developer fees |

IMPLEMENTATION

MEASURE 17

COUNTYWIDE BICYCLE AND PEDESTRIAN MASTER PLAN. Work with Amador County Transportation Commission (ACTC) in adopting and implementing a *Countywide Bicycle and Pedestrian Master Plan*. The plan should include a comprehensive system which designates bicycle and pedestrian routes within Jackson, incorporating as many off-street trails as possible to minimize conflicts with automobile traffic. Recommended components of an updated plan include:

- *New roads to accommodate bicyclists and pedestrians;*
- *A designated bicycle route stop located along SR 49 in downtown Jackson to include such facilities as bike racks and lockers for storage;*

- *Pedestrian-actuated signal crossings at key signalized intersections, particularly SR 49 at Main Street, SR 88, and Sutter Street;*
- *Parking facilities at trailheads; safe, well-lit, unobstructed walking routes; and quick and convenient services located street-side;*
- *Over- or underpass walkway between the Central Business District and City-owned Busi Parking Lot; and*
- *Bicycle lanes along new or reconstructed arterial and collector routes in, or adjacent to, the City, wherever possible.*

Responsibility: City staff, City Council, ACTC
 Time frame: FY 99-00
 Funding: Grants

IMPLEMENTATION

MEASURE 18

RIDESHARE INFORMATION. Contact the San Joaquin Council of Governments to obtain public information materials pertaining to carpooling and vanpooling for distribution to public employees and large private employers. Establish a noteboard in central public locations, (e.g. City Hall, Fire Station, and Library) to facilitate coordination of ridesharing activity.

Responsibility: City staff
 Time frame: FY 99
 Funding: General Fund

IMPLEMENTATION

MEASURE 19

AIRPORT LAND USE PLAN. Apply the policies and standards specified in the Airport Land Use Plan to new development projects during the development review process.

Responsibility: City staff, Planning Commission, City Council
 Time frame: Ongoing
 Funding: General Fund

IMPLEMENTATION

MEASURE 20

ENVIRONMENTAL REVIEW PROCESS. Conduct environmental review of proposed development projects to

assess the environmental impacts generated by the new development and identify needed mitigation measures.

| | |
|-----------------|------------------------------|
| Responsibility: | Various responsible agencies |
| Time frame: | Ongoing |
| Funding: | Application fees |

IMPLEMENTATION

MEASURE 21

BICYCLE SAFETY AWARENESS PROGRAM. Continue to work with the Cadet Program to present local schools with information regarding bicycle safety and the responsibilities of a cyclist. Continue to utilize bicycle safety program information provided by California State Automobile Association (CSAA) when available.

| | |
|-----------------|---|
| Responsibility: | Amador County Sheriff's Department, City of Jackson Police Department |
| Time frame: | Annually |
| Funding: | Grants |

III. EXISTING CIRCULATION SYSTEM

The following section describes the existing conditions of the City of Jackson circulation system including roadways, intersections, accidents, goods movement, transit, and bicycle and pedestrian facilities.

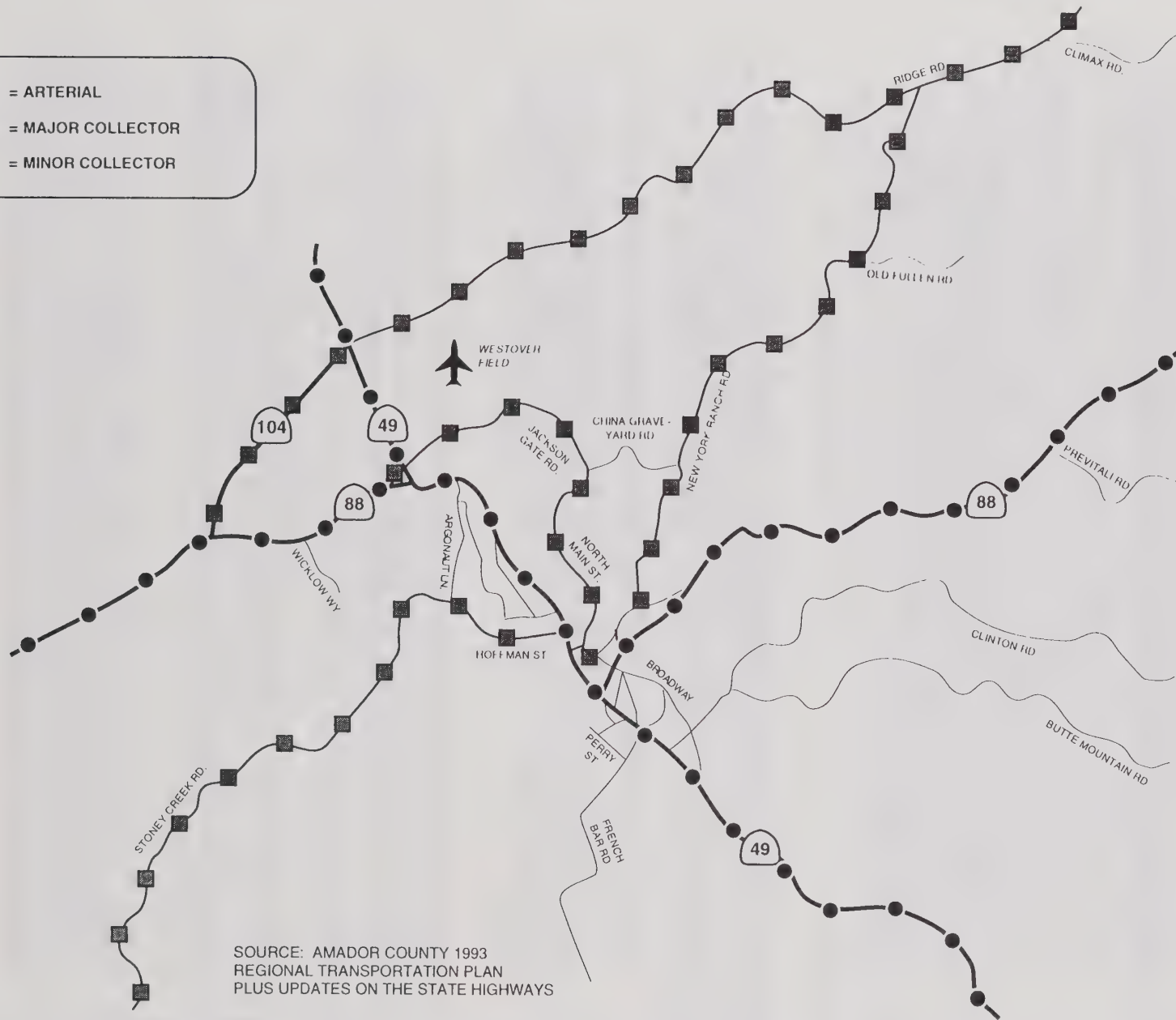
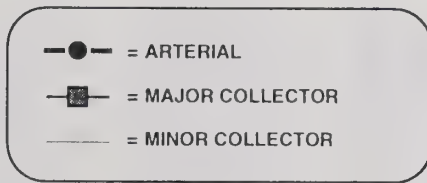
ROADWAY SYSTEM

Figure 2 displays the major roadways in the City of Jackson study area, along with their functional classification as determined by a cooperative Caltrans/local jurisdictional effort in 1992. The roadways fall into two general categories, which include State routes and local routes. Descriptions of individual roadways in each category are provided below.

State Routes

The State highways serving the Jackson study area include State Routes (SR) 49, 88, and 104. (See Figure 2). These routes provide for access to, from, and through the County. The following briefly describes each route.

- State Route 49, the Mother Lode Highway, sometimes referred to as the Golden Chain Highway, extends from Oakhurst in Madera County to Vinton in Plumas County, connecting many of the historic towns developed during the gold mining days. It is the major north/south highway through Amador County. Within the Jackson study area, SR 49 becomes coincidental with SR 88 between Martell and Jackson, and is classified as an arterial. Within the Jackson City limits, SR 49 bisects the City, providing access to much of the commercial uses on both sides of the highway as a four-lane facility with a continuous two-way left-turn lane.
- State Route 88 is a two-lane, principal arterial that runs west to east through Amador County, connecting San Joaquin County on the west to Alpine County near Kirkwood on the east. SR 88 becomes coincidental with SR 49 in the Martell area and runs south into the City of Jackson. Just south of the Jackson downtown area, SR 88 and SR 49 separate with SR 88 continuing to the east into Alpine County. SR 88 serves an abundance of both local and recreational traffic traveling through the Jackson area. The intersection of SR 49 and SR 88 is considered among the most heavily used intersections in Amador County.



SOURCE: AMADOR COUNTY 1993
 REGIONAL TRANSPORTATION PLAN
 PLUS UPDATES ON THE STATE HIGHWAYS



FIGURE 2

EXISTING FUNCTIONAL CLASSIFICATION SYSTEM

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- State Route 104 is a major collector which enters Amador County from SR 99 at Galt in Sacramento County, passes through the City of Ione, and intersects SR 88 at Post Mile 8.2 in Amador County, 2.3 miles east of Ione. It is then coincidental with SR 88 until 1.6 miles west of Martell, where it changes to a northeasterly direction as a major collector to SR 49 at Sutter Hill. At SR 49, Ridge Road becomes an eastern extension of SR 104 and continues as a County major collector road to SR 88 near Pine Grove. Although the majority of SR 104 is not within the Jackson planning area, the segment of SR 104 that is coincidental with SR 88 provides access into the Jackson planning area near the Martell area. This route is also important because it provides an alternate route for trucks instead of using SR 88 through Jackson. East of SR 49, the extension of SR 104 (Ridge Road) generally follows the northern boundary of Jackson's planning area.

Local Routes

The major local collector roadways within the study area include Hoffman Street/Stoney Creek Road, New York Ranch Road, North Main Street, Jackson Gate Road and Ridge Road. Descriptions of each facility are provided below.

- Hoffman Street/Stoney Creek Road extends in a southwest direction from SR 49 in the City of Jackson to Buena Vista Road near the Calaveras County line. In the Jackson study area, Hoffman Street provides access to Jackson Junior High School, Argonaut High School and the Amador County Administration Center.
- New York Ranch Road begins at Court Street in the City of Jackson and extends northward out of the City limits, where it connects with Ridge Road. Within the City limits, New York Ranch Road provides access to residential and professional office land uses.
- North Main Street is a historic route that extends from the downtown Jackson area to the north, where it transitions to Jackson Gate Road. North Main Street serves a variety of commercial, office and residential land uses between the downtown area and Jackson Gate Road.
- Jackson Gate Road loops around from SR 49 in the Martell area to the southeast, where it connects with North Main Street in the City of Jackson. Jackson Gate Road provides access from the Martell area to the northeast Jackson area, serving some commercial uses along its route.
- Ridge Road extends northeast from SR 104 in Sutter Creek into the Pine Grove area, where it connects with SR 88. Ridge Road generally borders the

northern portion of the Jackson planning area with some residential uses along its length.

Minor collectors with local significance include Argonaut Lane, Broadway, Butte Mountain Road, China Graveyard Road, Clinton Road, Court Street, and French Bar Road.

Roadway Operations

Field surveys were performed to document the general condition of the major roadways in the Jackson study area. The primary use of roadway condition data for this effort was to determine the effect of non-standard conditions on a road's capacity and ultimately its level of service. Key data factors include lane widths, shoulder widths, general terrain, percentage of the route in which passing is not allowed, and pavement condition.

Through the study area, the State Routes generally provide 11 to 12 foot lanes with varying shoulders between 0-4 feet. Many of the local routes have lane widths of less than 12 feet and limited shoulders, if any. The road segments within the study area are considered to be rolling terrain with generally good pavement conditions, with the majority of most sections not allowing for passing.

The quality of traffic operations is expressed in terms of level of service (LOS) ranging from LOS A (best) to LOS F (worst). Table 1 provides a qualitative description of each LOS category.

| Table 1 Level of Service Description | |
|--|---|
| Level of Service | Description |
| A | Represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream. |
| B | Stable flow, but the presence of others in the traffic stream begins to be noticeable. |
| C | Stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interaction with others in the traffic stream. |
| D | Represents high density, but stable flow. |
| E | Represents operating conditions at or near the capacity level. |
| F | Represents forced or breakdown flow. |
| Source: <i>Highway Capacity Manual - Special Report 209</i> , Transportation Research Board, 1994. | |

Level of service is measured for a road segment in terms the traffic volume in relation to its functional capacity. The capacity of a road segment is influenced by

many factors including lane width, shoulder width, terrain type, proportion of trucks, peaking characteristics, and ability to pass. The field data collected for existing road conditions was utilized to determine the capacity of key road segments according to methods described in the *Highway Capacity Manual - Special Report 209*, Transportation Research Board, 1994 and *Transportation Research Record 1194*, Transportation Research Board, 1988.

Figure 3 displays the average daily traffic volumes for the major roadways within the study area, including the peak daily volumes for the State Routes. As this information shows, the peak daily volumes are approximately 5 to 15 percent higher than average daily volumes. The segments of SR 88, west and east of the Jackson study area, have the highest peak daily percentage in the study area, with peak daily volumes 15 percent greater than average daily volumes. These peak periods typically occur the weekends as recreational travel, with both local and through travel encompassing a large portion of the demand.

In order to determine the existing LOS, the average daily and peak daily volumes were compared to road capacities developed for each classification of road. Table 2 presents the daily level of service criteria developed for the Jackson area roadways. Table 2 also identifies selected roads that fall into each category.

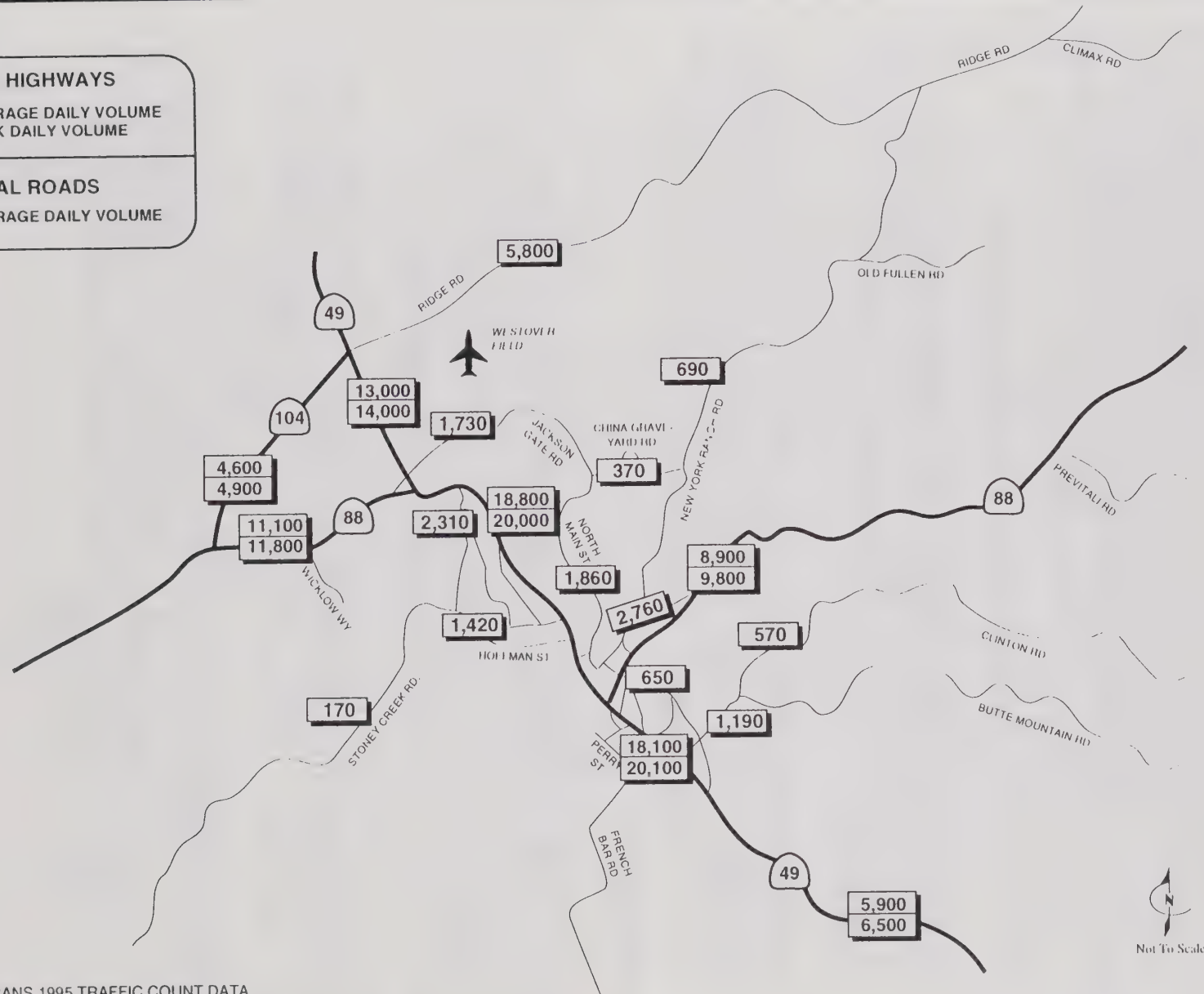
| <p>Table 2 Level of Service Criteria</p> | | | | | |
|--|--|--------|--------|--------|--------|
| Facility | Daily Service Volumes (vehicles per day) | | | | |
| | LOS A | LOS B | LOS C | LOS D | LOS E |
| Arterial A (SR 88 west of SR 49) ¹ | 2,600 | 5,900 | 10,300 | 16,900 | 20,200 |
| Arterial B (SR 49 – two lanes, SR 88 east of SR 49) ¹ | 1,600 | 4,500 | 8,600 | 14,200 | 18,600 |
| Arterial C (SR 49 – four lanes) ² | N/A | 24,900 | 30,800 | 32,700 | 34,900 |
| Arterial D (SR 49 with climbing lane) ² | N/A | 12,200 | 16,500 | 22,200 | 25,100 |
| Collector A (New York Ranch Rd, Clinton Rd, Argonaut, Jackson Gate) ¹ | 1,000 | 3,000 | 5,500 | 8,750 | 11,200 |
| Collector B (Main St., Hoffman St., Court St., Broadway) ¹ | 600 | 2,000 | 3,500 | 4,900 | 5,500 |
| <p>Notes: ¹ Source: <i>Transportation Research Record 1194</i>, Transportation Research Board, 1988. ² Source: <i>Highway Capacity Manual - Special Report 209</i>, Transportation Research Board, 1994. N/A = Not Achievable.</p> | | | | | |

STATE HIGHWAYS

XXX = AVERAGE DAILY VOLUME
YYY = PEAK DAILY VOLUME

LOCAL ROADS

ZZZ = AVERAGE DAILY VOLUME



SOURCE: CALTRANS 1995 TRAFFIC COUNT DATA
AMADOR COUNTY PUBLIC WORKS REPORT COUNT DATA



FIGURE 3

EXISTING TRAFFIC VOLUMES

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Figure 4 presents the existing average and peak daily LOS results for the roadway segments. As shown in Figure 4, most of the local roadways currently operate at LOS C or better under average daily conditions. However, sections of both the State Route 88 and 49 corridors operate unacceptably during average daily and peak daily conditions. State Route 49 north and south of State Route 88 operates acceptably as both sections are five-lane arterial roadways.

The following locations currently experience unacceptable operations.

- State Route 88 in Martell - experiences LOS D operations under average daily and peak daily conditions. Problems at this location are a result of a mix of through traffic with local traffic generated by adjacent the commercial developments.
- State Route 49 in Jackson - experiences LOS D operations under both average daily and peak daily conditions, even though a passing lane is provided for northbound (uphill) traffic. This segment is the central artery of western Amador County and serves very high volumes of traffic on a steep grade.

INTERSECTIONS

In addition to the congestion on the road segments of the State highway system, Jackson currently experiences two other types of circulation issues relative to intersections: (1) significant levels of peak hour congestion have been observed at key intersections; and (2) operational and safety problems exist due to limited sight distance and non-standard geometric design of certain intersections.

Similar to the problematic roadways, peak hour congestion at intersections occurs primarily on the state highways. These peak periods may occur during typical commuter hours on weekdays or during weekends as a result of tourist traffic. Specific locations within the current City limits are described below.

State Route 49 @ State Route 88 in Jackson is one of the most heavily traveled intersections in Amador County. It is the focal point of both local and regional traffic movements in western Amador County. The intersection has stop signs on all four approaches including SR 49 north and south, SR 88 east and Peek Street that forms the western leg of the intersection.

| STATE HIGHWAYS | |
|---|----------------------------|
| <div style="border: 1px solid black; padding: 2px;">B</div> | = AVERAGE LEVEL OF SERVICE |
| <div style="border: 1px solid black; padding: 2px;">B</div> | = PEAK LEVEL OF SERVICE |
| LOCAL ROADS | |
| <div style="border: 1px solid black; padding: 2px;">B</div> | = AVERAGE LEVEL OF SERVICE |

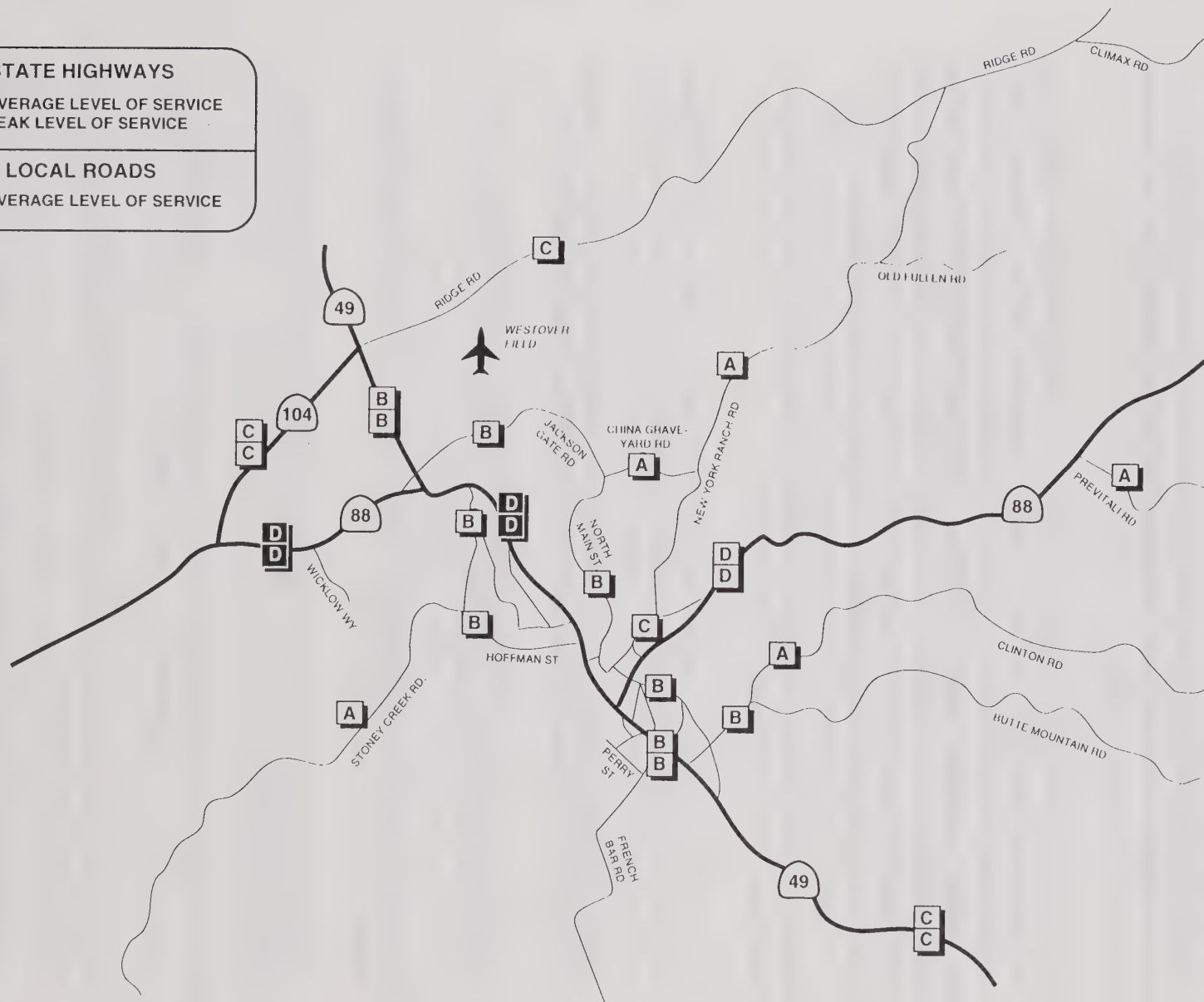


FIGURE 4

EXISTING DAILY LEVELS OF SERVICE

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State Route 49 @ Main Street is also an intersection that experiences high volumes of traffic during peak periods. This three-way intersection is controlled by stop signs on all approaches. The Main Street approach to the intersection is very wide and is located very close to the North Main Street intersection. The close proximity of the California Street intersection with Main Street also influences the operations. Problems are compounded by the high level of pedestrian activity that occurs at this intersection and in the near vicinity.

In general, both of these intersections experience similar problems in that through traffic is combined with high levels of locally generated traffic. Through traffic must utilize these routes since other routes to bypass the area are limited. Similarly, Jackson residents must use these routes to access the east side of SR 49 since no local street access is provided from SR 49 between Jackson Gate Road and Main Street. The City of Jackson is currently working with the Amador County Transportation Commission and Caltrans to implement traffic signals at both intersections.

In addition to these intersections, a number of other key intersections have operational and safety problems, which include:

- SR 49 @ Sutter Street - skewed angle of intersection, limited sight distance and conflicting movements with other driveways along the east side of SR 49;
- The Historic Broadway Corridor - between Clinton Road and SR 88 is limited by very narrow lanes and limited turning radii at several intersections;
- SR 49/Hoffman Street - limited by the steep grade and narrow width of Hoffman Street as it approaches SR 49;
- Argonaut Lane @ Argonaut Drive (west end) - limited sight distance due to skewed angle of intersection; and,
- SR 88 @ Broadway - limited by narrow lanes and close proximity to the SR 49/SR 88 intersection.

Although outside the Jackson City limits, three other key intersections in the planning area currently experience congested operations and safety deficiencies:

- SR 49 @ Jackson Gate Road - steep grades on SR 49 cause high speeds and increase accident potential;
- SR 49 @ SR 88 in Martell - steep grades affect sight distance and cause high speeds at this location; and,

- SR 49 @ Argonaut Lane - skewed angle of intersection, high speeds on SR 49, and impaired sight distance for the Argonaut Lane approach.

Caltrans is in the final stages of construction to realign the SR 49/SR 88 intersection in Martell and install a traffic signal. This improvement is expected to benefit not only operations at the SR 49/SR 88 intersection, but also the adjacent intersections at Jackson Gate Road and Argonaut Lane.

GOODS MOVEMENTS

Primary truck routes within the City include State Routes 49 and 88, as well as key local roads such as Main Street, North Main Street, Jackson Gate Road, Hoffman Street, Argonaut Lane and Clinton Road. Caltrans collects data to determine the number of trucks in the traffic stream on State highways. Along SR 88 (north), approximately 8 percent of the total vehicles are trucks, while just east of Jackson, SR 88 (south) is composed of approximately 7 percent truck traffic. Along the section of SR 49 in the Jackson study area, approximately 7-8 percent of the total vehicles are trucks.

TRANSIT

The Amador Rapid Transit System (ARTS) provides fixed-route/demand responsive bus service to the City of Jackson, as well as the other cities and small communities including Drytown, Fiddletown, Pine Grove, Pioneer and Buckhorn.

ARTS provides service Monday through Friday from 6:00 a.m. to 7:00 p.m. on seven routes. Saturday service is also provided between 9:30 a.m. to 4:00 p.m. on selected routes. The general fare is \$1.00 per person, while seniors and handicapped passengers ride for \$0.50. A book of 40 tickets can be purchased for \$34.00 (15 percent discount). Seniors and handicapped can buy a monthly pass for \$17.00.

Weekday and Saturday fixed-route service is provided between Jackson, Ione and Sutter Hill, and between Jackson and Mace Meadows. In addition, shuttle service is provided between Jackson and Sutter Creek, providing stops at or near the major shopping centers, business plazas, apartment complexes and parks between the two cities.

BIKEWAY AND PEDESTRIAN FACILITIES

Currently there are no designated bike routes in the City of Jackson. Although bicycling encompasses a very low percentage of all work trips, recreational bicycling is very popular. For years, the segment of SR 88 passing through the Jackson study area has been part of a popular trans-Sierra Nevada route for cyclists.

There is a need for a definitive bicycle route system throughout the City and interconnected to planned regional facilities.

The downtown Jackson area is heavily utilized by pedestrians, particularly by school children and people working and shopping along Main Street. SR 49 bisects this area and many of the pedestrian origins and destinations are located on each side of the road. For example, the schools and a parking lot are located on the west side of SR 49, while Detert Park and the Main Street shopping area are located on the east side of SR 49. Although crosswalks are located at the intersections of Sutter Street, Main Street and SR 88, none are controlled by traffic signals. There is a need to provide for the safe and efficient crossing of SR 49 in this area.

IV. FUTURE NEEDS ASSESSMENT

The purpose of the future needs assessment is to analyze projected traffic volumes and resulting deficiencies for 10-year (2006) and 20-year (2016) conditions, and to identify potential improvement options to improve the transportation system. Analysis of specific improvement alternatives is included in Chapter V.

UPDATED LAND USE PROJECTIONS

The land use projections used for this analysis were developed and refined by the Oversight Committee (OSC) to reflect the most recent plans for growth within Jackson. The updated projections revealed that a total of 979 new dwelling units are projected for development within the City. Based on a rate of 2.4 persons per household, the projected 2016 population is 6,230 persons as compared to a 1996 population of 3,880 persons. This represents a growth rate of 2.4 percent per year, which is slightly lower than the anticipated County-wide rate of 2.6 percent. Please refer to the August 5, 1996 technical memorandum entitled *Growth Projections and Buildout Assumptions* for more specific details regarding the location and extent of growth assumed in various geographic areas of the City.

FUTURE YEAR TRAFFIC FORECASTS

The Amador County traffic model was modified to include updated 2006 and 2016 land use projections for the City of Jackson and all other jurisdictions within the County. Growth data from the Department of Finance was also incorporated into the model to account for projected through travel and growth in the surrounding jurisdictions. The updated model, with additional roadway network detail in the Jackson area, was used to generate 2006 and 2016 traffic forecasts. These forecasts were compared to the volume threshold criteria listed in Table 2 to determine the projected level of service.

Figures 5 and 6 display the average daily traffic volume forecasts for area roadways in years 2006 and 2016, respectively. As expected, the most significant increases in traffic volumes occur on the State highways. The projected increase in growth of Calaveras County attracts a greater percentage of traffic to the SR 49 corridor south of Jackson. The existing trend of mixing through traffic with local development traffic is expected to continue to further exacerbate the problems along SR 49 and SR 88. Large increases in traffic also occur on some local roads such as Court Street and North Main Street.

ZZZ = AVERAGE DAILY VOLUME

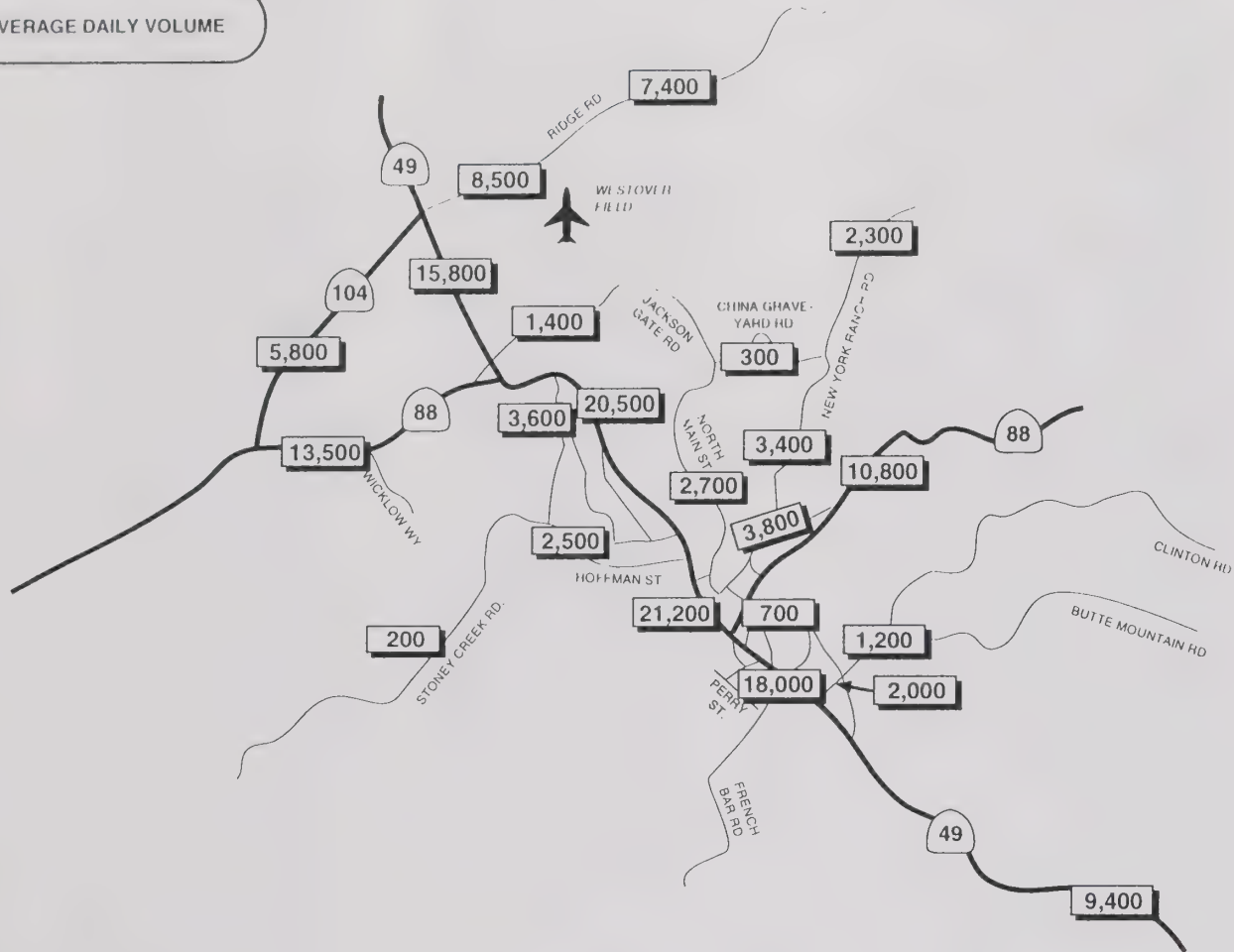


FIGURE 5

YEAR 2006 DAILY TRAFFIC VOLUMES

ZZZ = AVERAGE DAILY VOLUME

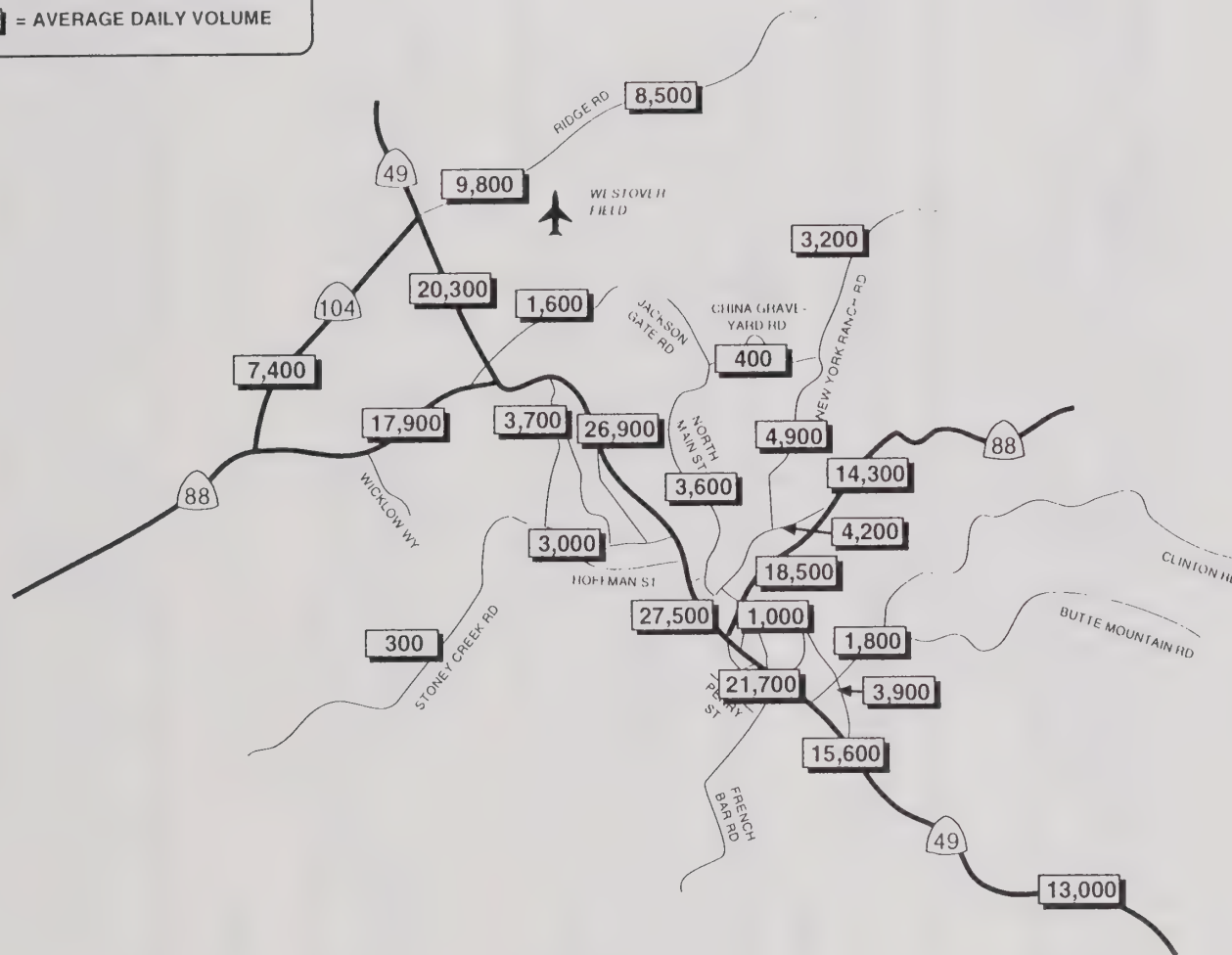


FIGURE 6

2016 DAILY TRAFFIC VOLUMES

CIRCULATION SYSTEM DEFICIENCIES

This discussion focuses on deficiencies that would result from future travel demand for the various circulation system components. Since the automobile is expected to continue in its role as the primary travel mode in this area, the deficiency analysis focuses on roadways and intersections. The other components of the circulation system are addressed qualitatively.

Roadway System

The volumes in Figures 5 and 6 were compared to the level of service thresholds described above to determine the deficiencies in 2006 and 2016 assuming no improvements to the road system (see Figures 7 and 8, respectively). Table 3 summarizes the deficient roadways under each planning horizon.

| Table 3 SUMMARY OF ROADWAY DEFICIENCIES | | |
|--|--------------------------------|------|
| Roadway Segment | Average Daily Level of Service | |
| | 2006 | 2016 |
| 1. SR 88 - SR 104 to SR 49 (in Martell) | D | E |
| 2. SR 88 - East of SR 49 | D | D/E |
| 3. SR 49 - SR 88 (Martell) to SR 88 (Jackson) | D | F |
| 4. SR 49 - Clinton Road to Calaveras County Line | D | D |
| 5. North Main Street | C | D |
| 6. Court Street | C | D |

As this shows, the State highway system will continue to experience the majority of the traffic congestion if no improvements are made. Traffic generated by new development in the area will cause both Court Street and North Main Street to operate unacceptably (LOS D) by 2016.

Goods Movement

It is anticipated that SR 49 and SR 88 will continue to be the primary truck access routes serving the City. It is important that consideration be given to the designation of certain new roads to allow truck traffic, particularly in the newly developing areas. Trucks should be directed to specific major roads in order to minimize the impacts on residential streets. The need to designate truck routes will become more critical as the City grows.

B = AVERAGE LEVEL OF SERVICE

NOTE: DARK SHADING INDICATES EXCEEDANCE OF THE SERVICE LEVEL STANDARD

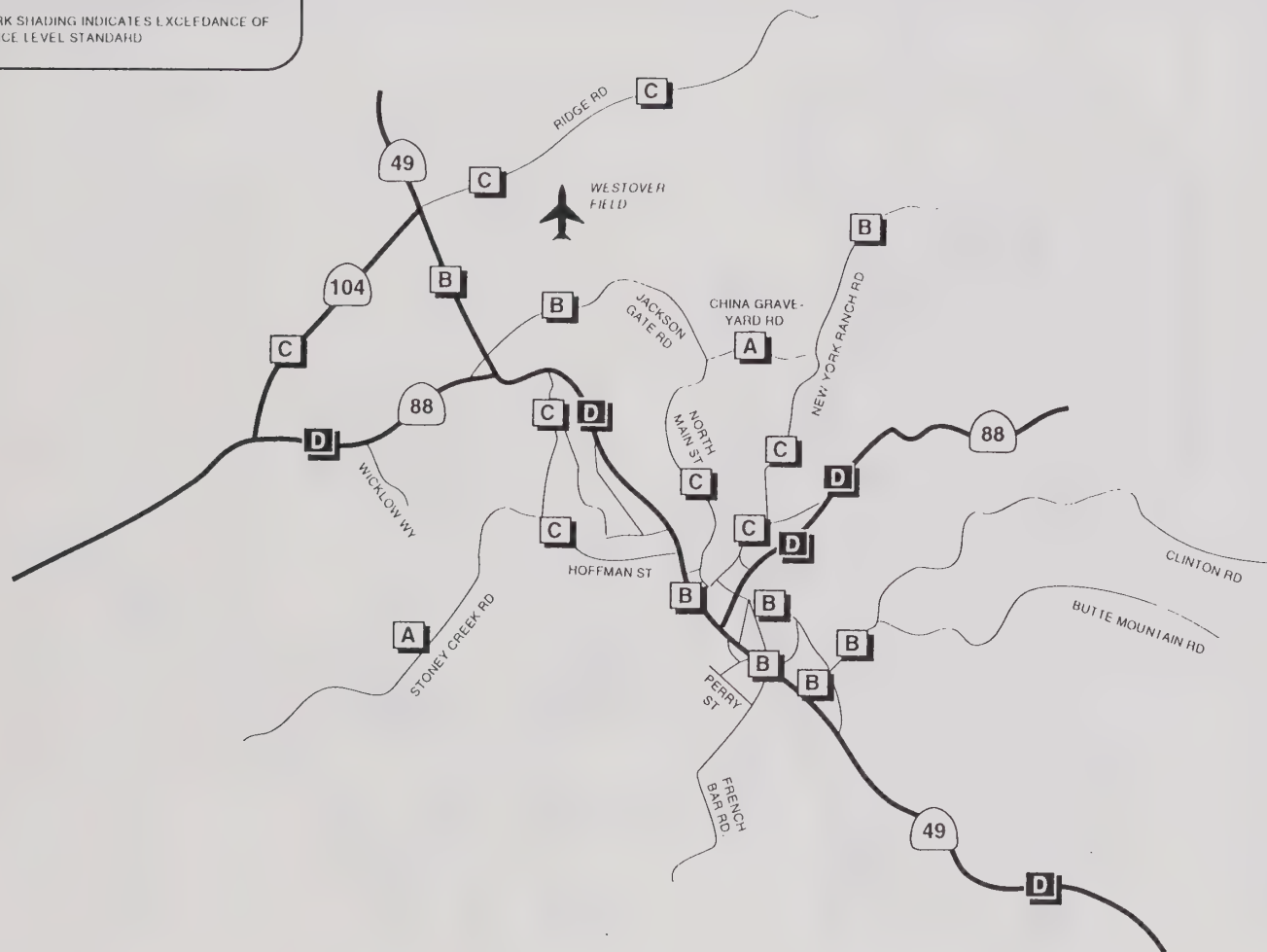


FIGURE 7

**YEAR 2006
DAILY LEVELS OF SERVICE**

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NOTE: DARK SHADING INDICATES EXCEEDANCE OF THE SERVICE LEVEL STANDARD



2016 LEVELS OF SERVICE

Transit

As the population and traffic increases in the future, the demand for bus transit services is also expected to increase. It is important that the Amador Rapid Transit Service expand the frequency and location of their bus service as the City grows. There is a need for the City to provide such amenities as designated bus stop locations, turnouts and shelters to better accommodate the ARTS services and to encourage bus travel as a mechanism to reduce traffic congestion.

Bikeway and Pedestrian Facilities

The demand for bicycle and pedestrian facility improvements will become even greater as the City and the surrounding area grows. Bicycle facilities will be needed for both recreational and commuter travel as an alternative to the automobile. The existing pedestrian circulation problems of a safe SR 49 crossing will become worse if no improvements are implemented. Other problems will occur in the newly developing areas unless actions are taken to develop a comprehensive bicycle and pedestrian circulation system. The Amador County Transportation Commission is currently developing such a plan for the entire County, with specific detail for the City of Jackson.

V. EVALUATION OF IMPROVEMENT OPTIONS

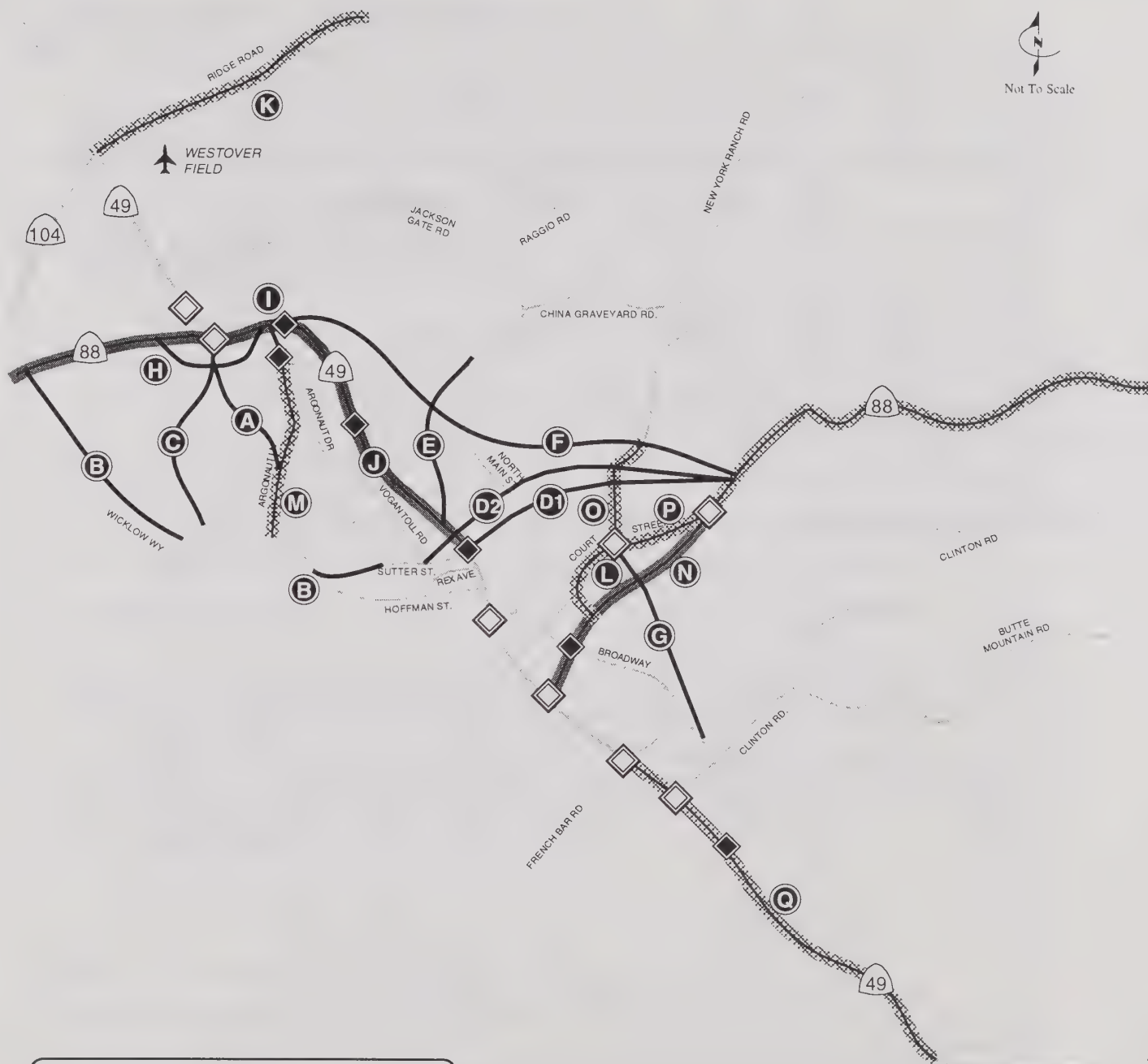
Based on the results of the future needs assessment, a series of improvement options were developed and evaluated to assist the OSC and other decision-makers in determining the most appropriate improvements for the 20-year planning horizon of the Jackson Circulation Element. This section summarizes the process of evaluating improvement options and the specific factors considered. This process was designed to screen options at varying levels of detail as the mechanism to select the most viable improvements. Factors considered in this analysis included cost, benefit to traffic operations, and financial and environmental constraints. Please refer to *Analysis of Improvement Options*, Fehr and Peers Associates, February 12, 1997 for the detailed assessment of the improvements.

Figure 9 displays the improvement options that were initially evaluated based on input from the Oversight Committee. As shown, these options consisted of new roads and road upgrades, such as the widening of lanes or the addition of shoulders. Figure 9 also displays the location of potential intersection capacity and operational improvements. Capacity improvements may include the following: installation of traffic signals, addition of exclusive turn lanes, and modification of existing turn lanes. Operational improvements may include intersection realignment, turning movement restrictions, sight distance improvements, and shoulder modifications.

TRAFFIC EVALUATION

The first technical step in the screening process was to determine whether the improvement options provided the level of benefit to traffic operations to merit further consideration. Each option was input into the Year 2016 traffic model and evaluated in terms of the level of benefit it provided to the Year 2016 deficiencies identified Chapter IV. The traffic volume thresholds in Table 2 were used as the basis of determining the extent to which an option improved a deficiency. Based on the analysis results, each option fell into one of the following categories.

- Category 1: The option provides a significant level of benefit to traffic operations in 2016. These options were the subject of further evaluation .
- Category 2: The option provides some benefit, but not enough to warrant further evaluation given the level of benefit provided by other options. These options were removed from consideration for the 20-year improvement program.
- Category 3: The option provides little or no benefit to traffic operations. These options were removed from further consideration.



- = POTENTIAL ROAD
- ▬ = POTENTIAL ROAD WIDENING
- ▨ = POTENTIAL ROAD UPGRADE
(E.G., PASSING LANES, SHOULDER IMPROVEMENTS)
- ◊ = CAPACITY IMPROVEMENT
- ◆ = OPERATIONAL IMPROVEMENT

NOTE: NEW ROUTE LOCATIONS ARE CONCEPTUAL FOR PLANNING PURPOSES ONLY.

FIGURE 9

IMPROVEMENT OPTIONS

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As stated above, each improvement option was included in one of three categories based on the results of the traffic analysis. Table 4 summarizes the status of each improvement option following the traffic analysis.

| <p style="text-align: center;">Table 4 Status of Improvement Options Following Traffic Evaluation</p> | | | |
|--|------------|------------|------------|
| Improvement Option | Category 1 | Category 2 | Category 3 |
| Option A - New Connection to Argonaut Lane | X | | |
| Option B - Wicklow Way / Sutter Street Extensions | X | | |
| Option C - New Connection to Stoney Creek Road | | X | |
| Option D - Sutter Street Extensions | X | | |
| Option E - Jackson Gate Road/SR 49 Connector | X | | |
| Option F - Kennedy Parkway | X | | |
| Option G - Mission Boulevard | X | | |
| Option H - Kennedy Flat Side Road Realignment | X | | |
| Option I - SR 49/Argonaut Lane Improvements | X | | |
| Option J - SR 49 Widening to Four Lanes | X | | |
| Option K - Ridge Road Improvements | X | | |
| Option L - New York Ranch Road Extension | | | X |
| Option M - Argonaut Lane Upgrade | X | | |
| Option N - SR 88 Widening to Five Lanes | X | | |
| Option O - SR 88 Upgrade | X | | |
| Option P - Court Street Upgrade | X | | |
| Option Q - SR 49 South Upgrade | X | | |
| <p>Notes: Category 1 Improvements are retained for consideration in Step 4. Category 2 Improvements are removed from consideration for the 2016 timeframe, but retained as a potential long range planning option. Category 3 Improvements are removed from further consideration.</p> | | | |

Table 4 shows that the majority of the improvement options were found to have some benefit to traffic operations. Only Option C (the new connection to Stoney Creek Road) was initially considered a Category 2 improvement for long-range planning purposes. Option L (New York Ranch Road Extension) was considered a Category 3 improvement and removed from further consideration at this stage.

EVALUATION OF OTHER FACTORS

As described above, an evaluation of other factors was conducted for those improvements deemed to provide some level of benefit to traffic operations by 2016. These factors included an evaluation of the physical and environmental constraints and cost estimates. Likely financial constraints are also discussed based on the type of improvement and its estimated cost.

Physical/Environmental Constraints

The physical and environmental constraints of each option were evaluated based on the best information available at the time. This information ranged from windshield surveys to detailed geologic information. The environmental studies conducted for the 1994 Amador County Regional Transportation Plan were of value for some options, as well as the studies conducted for the 1996/97 RTP Program EIR. Please refer to *Analysis of Improvement Options*, Fehr and Peers Associates, February 12, 1997 for a more detailed discussion of the physical and environmental impacts of each improvement option.

Financial Evaluation

Order-of-magnitude cost estimates were developed consistent with Caltrans District 10 unit cost data for each major improvement option discussed above. Cost estimates include the major construction items for new or improved roadways including excavation, paving, earthwork, structures, drainage, traffic signals, and other pertinent items. Table 5 summarizes the cost estimates for both construction and right-of-way.

| Table 5 Order-of-Magnitude Cost Estimates (1999 dollars) | | | |
|---|-------------------|---------------------------|----------------------------|
| Improvement Option | Construction Cost | Right-of-Way Cost | Total Cost |
| A – New Connection to Argonaut Lane | \$ 700,000 | \$ 1,010,000 ¹ | \$ 1,710,000 |
| B – Wicklow Way Extension | \$ 775,000 | \$ 240,000 ² | \$ 1,015,000 |
| B – Sutter Street West Extension | \$ 425,000 | \$ 107,000 ² | \$ 532,000 |
| D – Sutter Street East Extension | \$ 2,350,000 | \$530,000 ³ | \$ 2,880,000 |
| E – Jackson Gate Rd/SR 49 Connector | \$ 875,000 | \$ 0 | \$ 875,000 ⁴ |
| F – Kennedy Parkway | \$ 7,460,000 | \$ 750,000 | \$8,210,000 ⁴ |
| G – Mission Boulevard Extension | \$ 650,000 | \$ 0 | \$ 650,000 ⁴ |
| H – Kennedy Flat Side Rd Realign. | \$ 270,000 | \$ 800,000 ¹ | \$ 1,070,000 |
| I – SR 49/Argonaut Lane Imps. | \$ 210,000 | \$ 320,000 ¹ | \$ 530,000 |
| J – SR 49 Widening to Four Lanes | \$ 2,400,000 | \$ 270,000 ⁵ | \$ 2,670,000 |
| K – Ridge Road Moderate Standard Imps | \$ 12,000,000 | \$ 4,500,000 | \$ 16,500,000 ⁶ |
| K – Ridge Road Full Standard Imps | \$ 21,800,000 | \$ 5,500,000 | \$ 27,300,000 ⁶ |
| M – Argonaut Lane Upgrade | \$ 430,000 | \$100,000 ⁷ | \$ 530,000 |
| N – SR 88 Widening to Five Lanes | \$ 5,050,000 | - | \$ 5,050,000 ⁴ |
| O – SR 88 Upgrade | \$ 850,000 | \$ 0 ⁸ | \$ 850,000 |
| P – Court Street Upgrade | \$ 1,040,000 | - | \$ 1,040,000 ⁴ |
| Q – SR 49 South Upgrade | \$ 2,660,000 | \$ 0 | \$ 2,660,000 ⁴ |
| Notes: | | | |
| ¹ Assumes acquisition of some parcels in the corridor. | | | |
| ² Assumes 60-foot R.O.W. width at \$1.50 per square foot for length of the new alignment. | | | |
| ³ Costs for construction and R.O.W would vary slightly between D-1 and D-2 routes, but the order of magnitude cost would be similar. | | | |
| ⁴ Based on 1996/97 RTP with costs escalated to 1999 dollars. | | | |
| ⁵ Assumes some R.O.W. may be necessary for steep slope areas. | | | |
| ⁶ Source: Ridge Road/Climax Road Phase II Preliminary Engineering Study, June 29, 1996. | | | |
| ⁷ Assumes small sections of R.O.W. may be necessary in isolated locations. | | | |
| ⁸ Assumes no new R.O.W. is required. | | | |

VI. PREFERRED CIRCULATION PLAN

This section describes the preferred circulation plan improvements based on the evaluation presented above. Improvements are identified for the roadways, intersections, goods movement, transit, bicycle and pedestrian systems. Figure 10 displays the preferred circulation plan, while Figure 11 displays the proposed functional classification system.

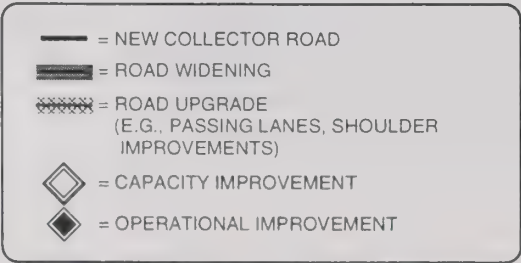
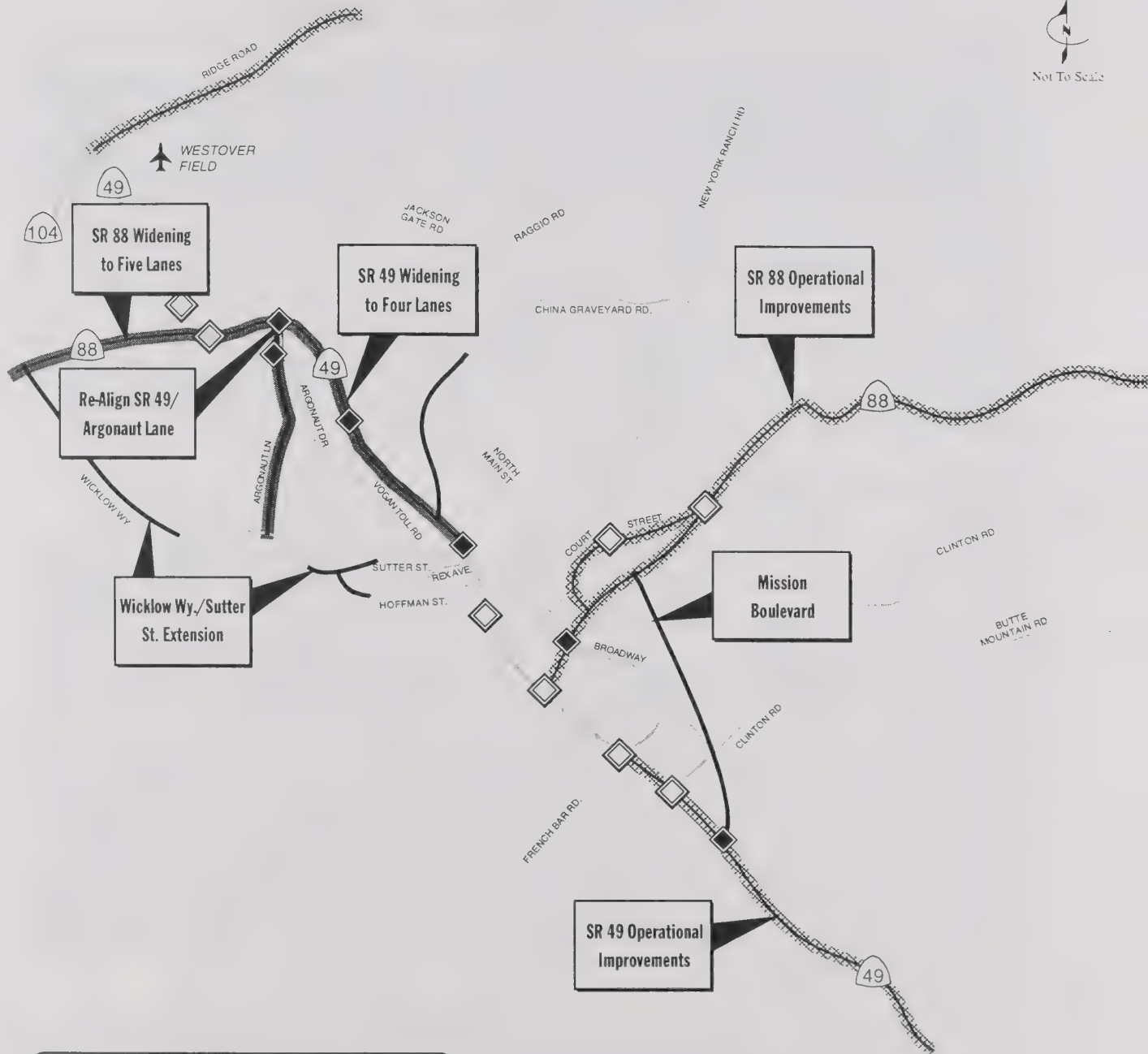
Recommended Roadway System

Figure 10 shows improvements that comprise the recommendations for the future roadway system. These include the minimum requirements to achieve the acceptable operations at the lowest cost. The following describes the recommended improvements by area of the City.

Northeast Area Improvements

Both Kennedy Parkway and the Sutter Street extension options include substantial cost and likely impacts to the historic areas of northeast Jackson. Although both provide a high degree of traffic service, the options to improve the existing State routes provide adequate operations at a much lower cost and with far fewer impacts. Pending an environmental review to assess its feasibility, the addition of a fourth lane to existing SR 49 (Option J) is recommended to be included in the plan. This will achieve LOS C operations on that segment. Option O, operational improvements to SR 88 including the intersections with SR 49, Broadway, and Court Street, will achieve LOS D operations, but will avoid the high cost and the environmental impacts associated with the full five-lane widening (Option N). It is recommended that the Plan include Option O, along with a policy statement that accepts LOS D operations on SR 88 (see Policy 2.A of this document). Upgrade improvements to Court Street are also recommended to improve safety and operations of this route.

Another important improvement for the northeast area is the Jackson Gate Road/SR 49 Connector (Option E). This route is recommended for inclusion in the Plan as it provide access to planned commercial development on SR 49, while at the same time, alleviates congestion on Main Street near the SR 49 intersection.



NOTE: NEW ROUTE LOCATIONS ARE CONCEPTUAL FOR PLANNING PURPOSES ONLY.

FIGURE 10

RECOMMENDED 2016 ROADWAY SYSTEM

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- = ARTERIAL
- = MAJOR COLLECTOR
- = MINOR COLLECTOR

NOTE: NEW ROUTE LOCATIONS ARE CONCEPTUAL FOR PLANNING PURPOSES ONLY.

FIGURE 11

PROPOSED FUNCTIONAL CLASSIFICATION SYSTEM

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In addition to these improvements in Jackson, 1996/97 Regional Transportation Plan includes some improvements to the Ridge Road/Climax Road route. These improvements, along with the improvements in Jackson discussed above, will continue to route portions of the regional traffic on both routes. Given the financial constraints discussed above, neither the full state standard or moderate standard improvements were deemed financially feasible. However, the \$6 million investment in the route will improve its operational efficiency and safety. Examples include turn lanes at intersections, shoulder improvements in the central and eastern portions of the corridor, and spot sight distance improvements. These improvements are not included in the Jackson Circulation Element, but are important components of the Amador County Regional Transportation Plan.

Wicklow Way/Sutter Street Extension Options

Option B, the Wicklow Way and Sutter Street extension route is recommended to be included in the Plan to better facilitate local circulation in the west Jackson and Martell areas. The proposed routes also provide the lowest cost options and the lowest potential for attracting through traffic. Along with these improvements come modifications to the following intersections:

- SR 88/Wicklow Way;
- Sutter Street/Hoffman Street; and
- SR 49/Sutter Street.

These improvements are also included in the Martell Area Circulation Plan. The Sutter Street extension is included in the Jackson Circulation Element, while the Wicklow Way extension is included in the Amador County RTP/Circulation Element.

SR 49/Argonaut Lane Options

Option I, the SR 49/Argonaut Lane intersection realignment, is recommended for inclusion in the Plan (see Figure 12). This option would improve sight distance for traffic turning left from Argonaut Lane looking southeast along SR 49 towards Jackson. Sight distance looking west would also be improved by raising the vertical grade of SR 49 as it departs the SR 88 intersection and approaches the Argonaut Lane intersection. This option would be less costly and would involve fewer impacts to properties than Option A, the New Connection to Argonaut Lane.

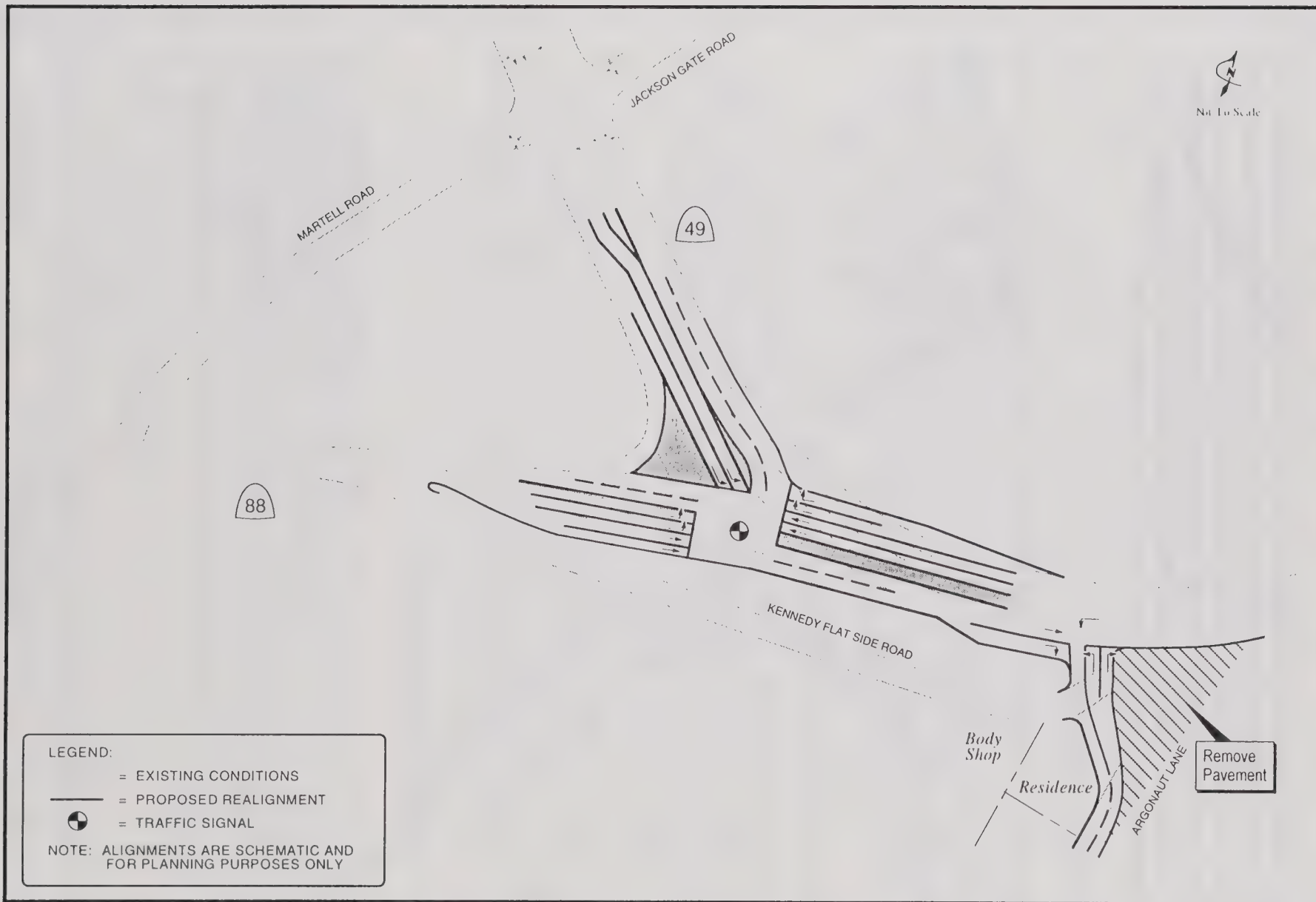


FIGURE 12

SR 49/ARGONAUT LANE REALIGNMENT

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Option M, the Argonaut Lane upgrade, is also recommended for inclusion in the Plan. Safety and operational improvements would be facilitated at key intersections along the northern portion of the route including Argonaut Lane/Argonaut Drive and Argonaut Lane/Amador Street. Operations and safety enhancements would be realized along this existing route without the higher cost of a new route. These improvements are included in the Martell Area Circulation Plan.

Southeast Area Improvements

Both the Mission Boulevard extension (Option G) and the proposed upgrade to SR 49 (Option Q) are recommended to be included in the Plan. The City has initiated the implementation of Mission Boulevard through the Sutter Hospital project. Improvements to SR 49 south of French Bar Road will achieve LOS C operations in 2016. Option Q (operational improvements to SR 49) is also consistent with the improvements at the intersections of SR 49 with French Bar Road and Clinton Road.

Long Range Planning Options

The recommended roadway system is based on the growth assumptions described in the August 5, 1996 memorandum. If these assumptions should change substantially (i.e., different land uses of a faster rate of growth), the Circulation Plan should be updated. In any event, the plan must be updated to address the long term needs for conditions after 2016.

Figure 13 displays several improvement options that should be considered for long-range planning purposes (after 2016). These options would be in addition to the 20-year circulation plan improvements identified above. Several of the new roadways shown have been considered in this document and demonstrated potential merit, but not within the 20-year time frame.

INTERSECTION IMPROVEMENTS

Jackson currently experiences two types of circulation issues relative to intersections: (1) significant levels of peak hour congestion requiring capacity enhancing improvements; and (2) operational problems that exist due to limited sight distance and non-standard geometric design of certain intersections. The following describes the effects of the recommended roadway improvements on these intersections and provides recommendations for additional improvements where necessary.

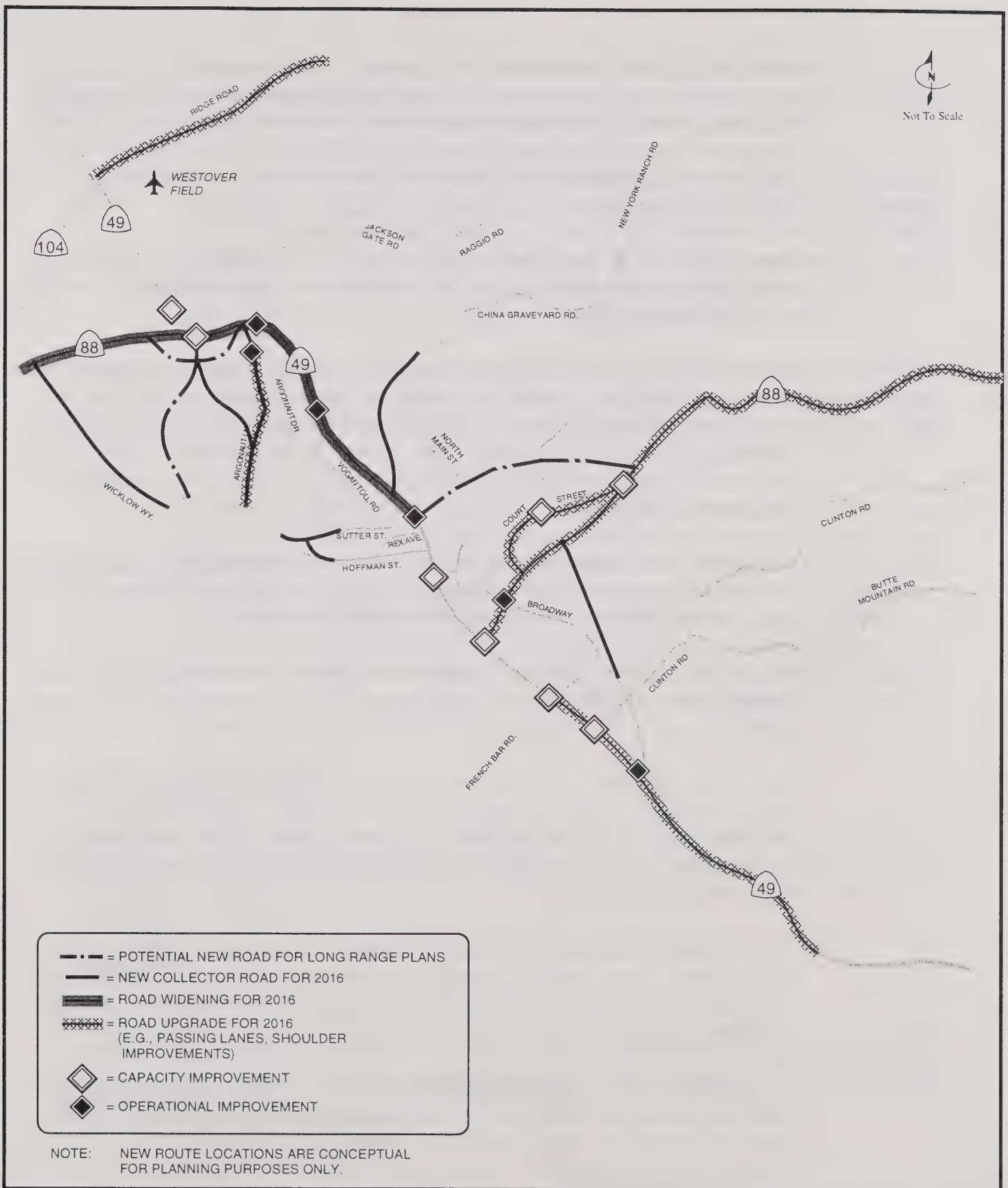


FIGURE 13

LONG RANGE PLANNING OPTIONS

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- **State Route 49 @ State Route 88 in Jackson** - As stated above, the City is currently working with the ACTC and Caltrans to install a traffic signal at this intersection. This improvement will reduce delay, but the City has expressed some concerns regarding potential affects on the SR 88/Broadway intersection caused by cars stacking back from the SR 49/SR 88 intersection.
- **State Route 49 @ Main Street** - The City is also working to secure the installation of a traffic signal at this intersection at the same time as the SR 49/SR 88 intersection.
- **SR 49 @ Sutter Street** - This intersection will be accessed by increased levels of traffic as a result of the Sutter Street Extension and the de-emphasis of Hoffman Street. The primary problem at this location is the skewed angle of intersection. The Sutter Street approach should be realigned to intersect SR 49 at a 90 degree angle, or as much as possible to improve sight distance.
- **SR 49 @ French Bar Road** - This intersection will serve additional traffic via proposed development southwest of SR 49 in the area. Ultimate plans for this intersection include turn lanes and signalization.
- **SR 49 @ Clinton Road** - Similar to the French Bar intersection, this intersection is planned for improvements in conjunction with area development.
- **SR 49 @ Broadway** - This intersection will likely require capacity improvements in conjunction with Mission Boulevard and as development occurs in the Saint Sava area. In addition, the Broadway approach should be realigned to intersect SR 49 at a right angle to improve sight distance.
- **The Historic Broadway Corridor** - Mission Boulevard will attract much of the traffic away from Broadway and preserve the limited capacity of this route and its intersections. The Broadway Bridge (middle fork) was recently replaced.
- **Argonaut Lane @ Argonaut Drive (west end)** - It is recommended that this intersection be realigned to a right angle to improve sight distance. This improvement would likely be constructed in conjunction with the Argonaut Lane upgrade.

- **Court Street @ SR 88** - This intersection should be improved with turn lanes in conjunction with the improvement projects planned for both SR 88 (road upgrade improvements) and the Court Street upgrade.
- **SR 49 @ SR 88 in Martell** - Caltrans is in the final stage of completing construction of improvements to this intersection. The improvements involve the reorientation of the intersection to intersect SR 49 into SR 88 as a signalized T-intersection (Alternative B) and the addition of turning lanes and through lanes. Minor modifications would also be made to the super-elevation of SR 49 in the area to improve truck movements.
- **SR 49 @ Argonaut Lane** -This intersection has a high accident rate caused by restricted sight distance for left-turning vehicles. The recommended improvements (Option I) will relocate the intersection and improve sight distance.
- **SR 49 @ Jackson Gate Road** - Limited sight distance and high travel speeds on SR 49 have caused this intersection to be rated as one of the highest accident rate locations in Amador County. The proposed signalization and turn-lane improvements at the SR 49/SR 88 intersection in Martell are expected to increase the availability of gaps in traffic flow on SR 49 at the Jackson Gate Road intersection. If accidents are still prevalent at this intersection after the SR 49/SR 88 improvements are in place, left-turn access may be eliminated and shifted to U-turning movements at the SR 49/SR 88 signal.

GOODS MOVEMENT

Designated truck routes should be provided on the key roadways in which heavy vehicles are to be channeled. Figure 14 displays the primary truck routes within the preferred circulation plan which include SR 49, SR 88, the Jackson Gate Road /SR 49 connector, and Mission Boulevard.

TRANSIT

The Amador Rapid Transit System (ARTS) currently provides local service to the City of Jackson and connecting to several other destinations in Amador County. However, no public transit services currently connect Jackson to destinations outside of the County.

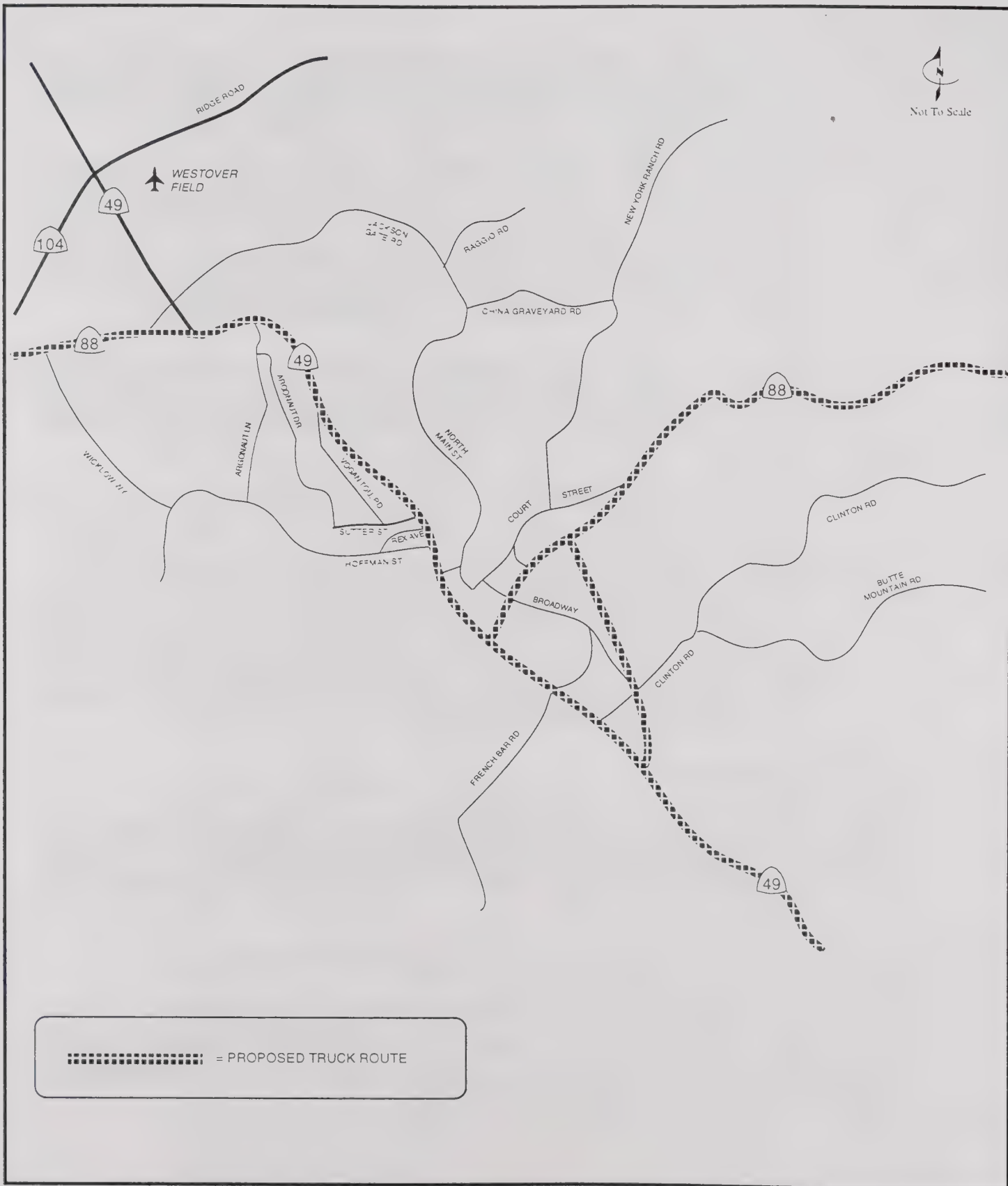


FIGURE 14

PROPOSED TRUCK ROUTES

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In 1997, the ACTC completed the *Inter-County Transit Feasibility Study*, Nelson/Nygaard Consulting Associates, January 1997. The study evaluated the feasibility of several options for implementing inter-county transit service between Amador County and downtown Sacramento. The study recommends implementation of a demonstration project that would provide fixed-route bus service from Jackson to Ione to the CSUS light rail station and downtown Sacramento. The City of Jackson should support implementation of this demonstration project.

In terms of local service for ARTS, access would be enhanced by the installation of bus turnouts and transit shelters along major routes in the City. These types of improvements are often most effective when located adjacent to a major access point such as large residential area or a shopping center. It is recommended that the Capital Improvement Program include these improvements to be implemented in conjunction with road widenings or new road construction.

BIKEWAY AND PEDESTRIAN FACILITIES

The Amador County Transportation Commission is in the process of developing a comprehensive Bicycle and Pedestrian Master Plan for all of Amador County. An extensive inventory of existing facilities was completed in 1994 and progress is being made on the development of the Plan as planning funds are available.

Bicycle and pedestrian route planning is particularly important in Jackson given the high volumes of automobile traffic (both present and future) that conflicts with bicycles and pedestrians in the area. It is important that the Bicycle and Pedestrian Master Plan include designation of a comprehensive system to serve the area, with the inclusion of as many off-street trails as possible in order to minimize the conflicts with automobile traffic. New roads should also be constructed to accommodate bicyclists and pedestrians.

It is recommended that a bicycle route stop location be incorporated into downtown Jackson. This improvement involves a designated area for bicyclists to stop along a major route (i.e. SR 49) and will include such facilities as bike racks and lockers for storage. It is also recommended that pedestrian-actuated signal crossings be incorporated into the signalization of key intersections, particularly SR 49 at Main Street, SR 88, and Sutter Street. Once these traffic signals are constructed, all pedestrian crossings of SR 49 in this area should occur at these locations.

